

20-PAGE **AUTOSPORT** SHOW GUIDE

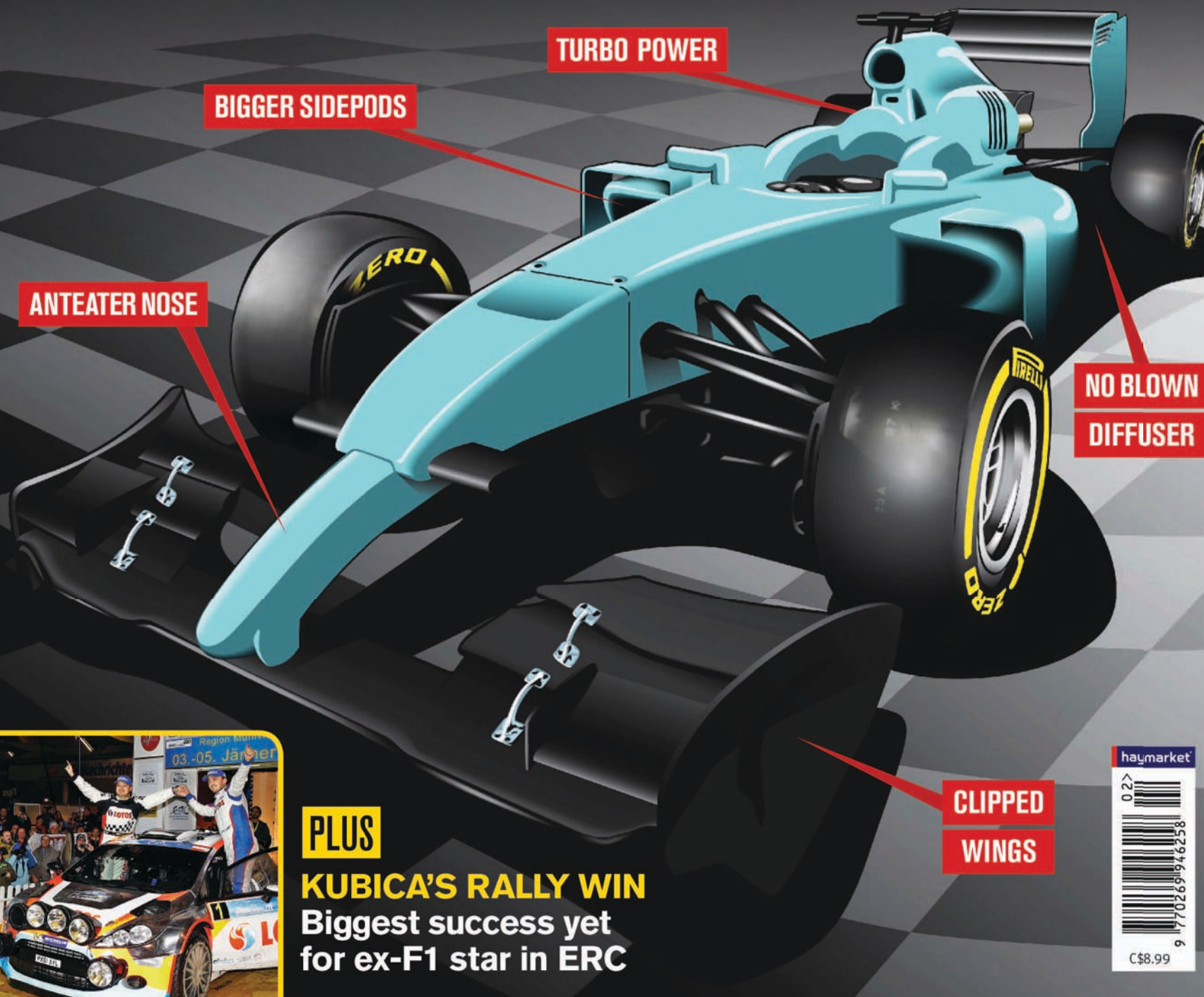
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F1 2014 REVEALED

How turbo revolution will transform F1



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Le man

After a 32 year career, 29 victories for the Audi sports-prototype teams, 18 pole positions, 17 fastest laps, and four title wins, the flying Scotsman, Allan McNish, is retiring. Our partnership with Allan began in 2000, culminating in victories in both the 2013 Le Mans 24 Hours and FIA World Endurance Championship. A track record that will ensure he remains one of the world's finest endurance racers. Thank you Allan, from all your friends at Audi.



POLE POSITION

Countdown to the 2014 F1 season begins here

AS OF TODAY (THURSDAY) THERE ARE 66 DAYS UNTIL the first grand prix of the year in Melbourne. Before that, there are just three tests for teams to hone their radically different 2014 challengers, as the boffins engineer around the biggest new rules package in decades.

The return of turbo engines, combined with dual energy-recovery systems and reduced aerodynamic efficiency, has the potential to shake up the pecking order. In this week's issue, we've delved beneath the skin of these next-generation racecars so you know what to expect when the real machines are launched at the end of this month.

As Ferrari's Pat Fry says, "the opportunities for getting it wrong are going to be massive" – and the news that Lotus is going to skip the first test at Jerez is an indicator of the "mild panic and crisis management" that Adrian Newey alluded to at our Awards. Even the top teams might find this journey an uncomfortable ride.

So who is going to come out of all this uncertainty on top? Bar the usual suspects, I haven't a clue. And it's going to be fascinating finding out.



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PRIVATE EAR



FERRARI/LAT

FIND US ON



Cover illustration: Alan Eldridge
Inset: Baudin/DPPI

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THE BIG PICTURE

Carlos Sousa was the opening-day leader of the Dakar Rally in his Haval, but 11-time event winner Stephane Peterhansel was leading by Tuesday (report, page 77)





This week in F1

SCHUMACHER REMAINS STABLE

Michael Schumacher was officially listed as in a critical but stable condition and continued to be in an induced coma as AUTOSPORT closed for press.

The seven-times world champion suffered a severe head injury while skiing in the French Alps on December 29. He remains under

care at a hospital in Grenoble.

In the wake of numerous inaccurate reports about the 44-year-old's condition, his manager Sabine Kehm issued a statement warning about invalid information:

"We would like to clearly stress that any information regarding Michael's health not coming from the doctors treating him or from his management must be treated as invalid and pure speculation."



COATES/LAT

P13 DR GARY HARTSTEIN ON SCHUMACHER

Schumacher hospital has attracted much attention



"Le Mans never really ticked the boxes for me"



Jenson Button has no interest in following Mark Webber into sportscars once his F1 career is over

GREEN LIGHT FOR AUSTRIAN RETURN

The return of the Austrian GP has been given the final go-ahead by local authorities. The race, which will be held at the Red Bull Ring on June 22, had to go through district administration formalities.



Lotus to miss Jerez testing

Lotus will miss the first pre-season test at Jerez later this month, with its new E22 now not scheduled to make its track debut until February 19 in Bahrain. Technical director Nick Chester said: "We're going

to keep our car under wraps a little longer than some other teams. We've decided that attending the Jerez test isn't ideal for our build-and-development programme."

FERRARO/LAT



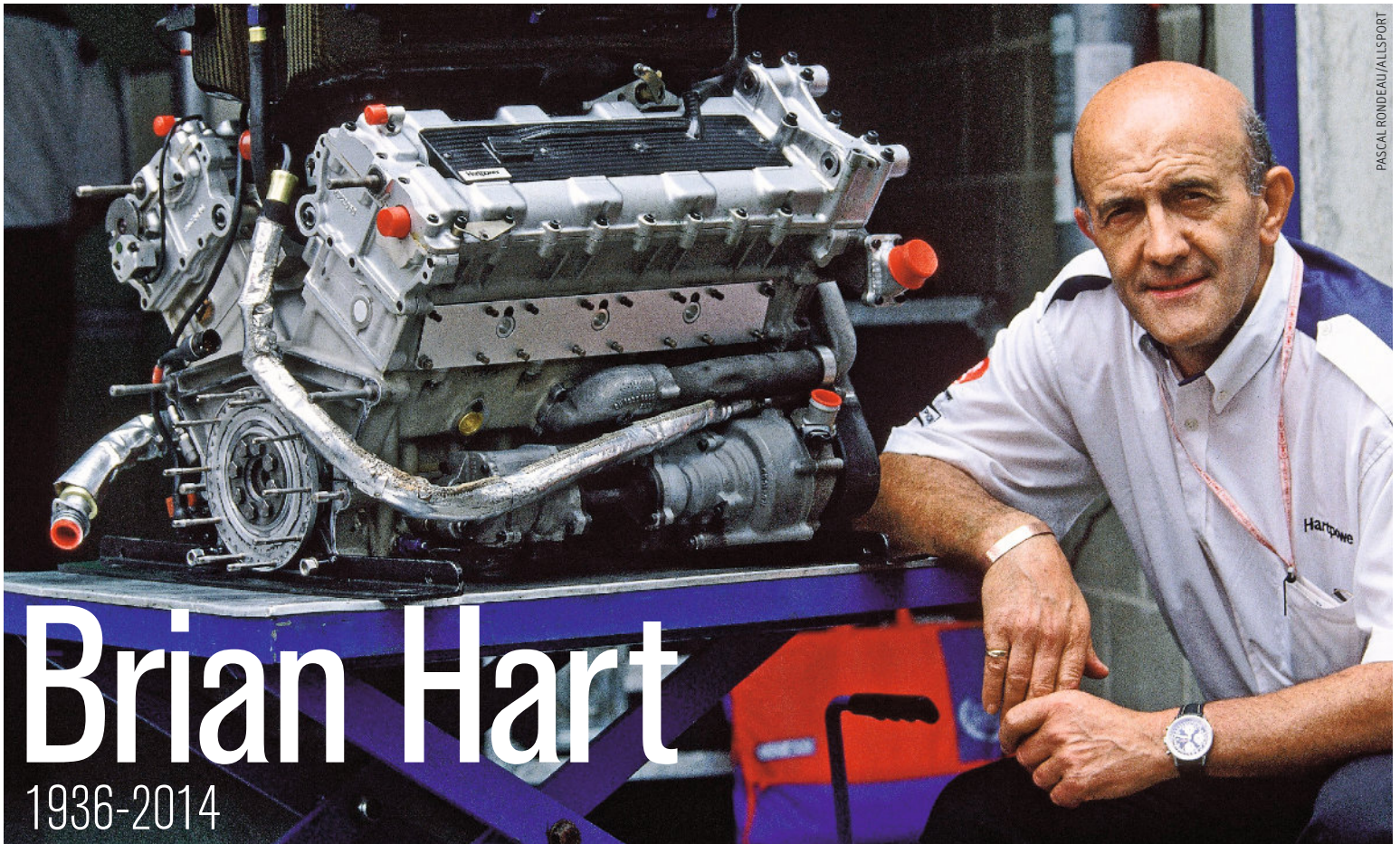
Force India eyes top five

Force India deputy team principal Bob Fernley believes breaking into the top five in the constructors' championship is a realistic target for the team. "It has to be higher next year," he said of the team, which finished sixth in 2013.

DID YOU KNOW?

Force India finished third in the constructors' championship in 1999 in its Jordan guise.



For all the breaking news, visit AUTOSPORT.COM

PASCAL RONDEAU/ALLSPORT

Brian Hart

1936-2014

Brian Hart, who died last weekend, was the last of the true independent engine builders to thrive in F1, claiming podium finishes with Jordan and Arrows in the mid-1990s.

Hart was an accomplished driver, dominating the 1172cc Clubmans scene in the UK and emerging as a race-winning driver in Formula Junior, F3 and F2 events. He appeared at the highest level, racing the Frank Costin-designed Protos in the F2 class of the 1967 German Grand Prix at the Nurburgring.

But it is as an engine builder that he earned fame. After working with Cosworth, he established Brian Hart Ltd in 1969 and specialised in rebuilding Cosworth FVA engines. After developing the BDA engine for rallying for Ford, he adapted it for F2. It propelled Ronnie Peterson and Mike Hailwood to the 1971 and '72 European F2 titles. Hart re-emerged as a

frontrunning F2 engine builder in '77, and his big break came in '79 when the Toleman Group engaged him to supply engines. Brian Henton almost won the '79 European F2 title driving a Ralt RT2 and did clinch the crown driving the Toleman-Hart in '80.

In '81, Hart graduated to F1 with a hastily-prepared 1.5-litre four-cylinder turbo along with Toleman. Henton and Derek Warwick only qualified for two races, but Hart would earn many admirers for producing an increasingly competitive engine on a shoestring. In 1984, the Hart turbo propelled Ayrton Senna to three podiums, including a near-win in Monaco.

"Brian was very organised, always positive with everything very clean and tidy," says Warwick, who raced with Hart power in F2 and F1. "He was fit, sharp and had the respect of every engine builder in the pitlane. I know that [BMW's] Paul Rosche was one who had a lot of time for Brian because everyone knew what an unbelievable job he was

doing with the budget he had.

"Brian was a big part of the team and would help the mechanics whenever he could. But you didn't want to get on the wrong side of him and if you messed up he would let you know. Equally, if he didn't deliver he would tell you. It was an honour to know Brian."

With Toleman taken over by Benetton and switching to BMW power in 1986, Hart dropped out of F1 early that year after a brief spell powering the Haas team.

He went on to prep Cosworth customer F1 engines before

returning to supply Jordan with his 3.5-litre V10 in 1993. After a difficult first season, the partnership flourished in '94, with Rubens Barrichello claiming pole at Spa and finishing third at Aida.

"There was nothing in the world as satisfying for Brian Hart and myself as taking on the big boys who had 10 times the budget and showing them up on Sunday afternoon," says former Jordan technical director Gary Anderson.

Jordan landed works Peugeot engines for 1995, leaving Hart to supply Arrows for the next two years. After powering Minardi in '97, Hart returned to run the Arrows engine project in '98 and dropped out of F1 following Tom Walkinshaw's acquisition of Brian Hart Ltd.


"Brian was fit, sharp and had the respect of every engine builder" DEREK WARWICK


Jordan-Hart took Spa '94 pole



LAT



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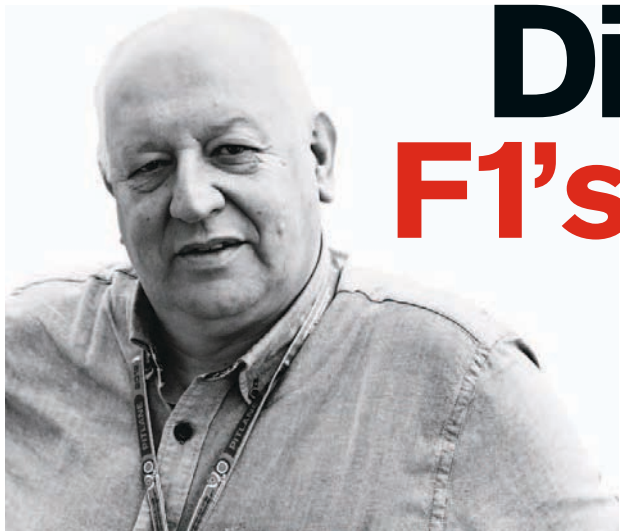


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- Most technologically advanced UK single seat series
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Go Further



Dieter Rencken

F1's political animal

Ferrari's Luca di Montezemolo wants to get the F1 teams together to discuss the future, two years after quitting FOTA

One of the most mystifying developments during Formula 1's festive season was Ferrari president Luca di Montezemolo's stated desire to call a summit "to discuss the nature of F1 with the teams".

"We have to make proposals to do something, without putting anyone in the corner – and not [do deals] under the table. I want to do it in a very open way," the patrician Roman told AUTOSPORT at the Scuderia's Christmas media luncheon. "I want to have more dialogue between the teams – not about competition, but looking at the problems with F1."

While there is absolutely no denying that the so-called "nature of F1" is in dire need of urgent discussion, di Montezemolo's call to arms is rather baffling, not least because a forum to discuss precisely such matters exists and was, indeed, formed as a direct result of a similar battle cry from him in mid-2008.

Ferrari's boss became charter chairman of the Formula One Teams' Association – as the resultant body came to be known – with FOTA's founding secretary-general being hand-picked from Confindustria, an employers' association di Montezemolo previously headed.

Di Montezemolo went on to serve two FOTA terms before handing over to McLaren's Martin Whitmarsh (who heads the team alliance to this day) and thus knows a thing or two about FOTA's workings despite Ferrari, in common with Red Bull Racing/Toro Rosso and Sauber,

convene crucial meetings despite the enormous challenges facing F1, in turn enabling the Commercial Rights Holder (CRH) to run rings around 11 usually astute businessfolk...

A cert on the summit's agenda – should it come to pass – is the question of cost saving, and here Ferrari (and Red Bull/Toro Rosso) remain at odds with FOTA, which favours, as does the FIA (which has formed a working group), cost caps.

Di Montezemolo suspects manufacturer-owned teams could be tempted to circumvent caps through having subsidiaries or associates provide advantageous goods/services, citing Daimler (Mercedes) and Fiat/Chrysler (Ferrari) as possible culprits. Further division...

However, he cites one example of the urgent need for cost control as "this year all the movements of the drivers" bar those at Ferrari involved pay drivers. Setting aside that this overlooks nemesis Red Bull, whose elevation of Daniel Ricciardo was hardly driven by his wallet, the Italian has a point, save that all teams afflicted thus do not benefit from substantial premiums paid by the CRH to Constructors Championship Bonus teams: Ferrari, Red Bull, McLaren and Mercedes.

Ask any team boss whose performances are marginalised by lower annual payouts whether he/she would elect to appoint a superstar rather than begging for bucks in the back of beyond and the answer is surely a resounding "yes!" Look no further than Lotus, the

"FOTA members have every right to be bemused by di Montezemolo's proposal"

withdrawing from FOTA at the end of 2011 after a row over F1's then-Resource Restriction Agreement.

There is no doubt that this quadruple defection, plus withdrawal by HRT over membership costs, wounded FOTA, but the body continues to play active roles in such as testing, cost-cutting and further issues that affect F1, and diligently consults Ferrari over common issues. In fact, sources confirm that FOTA proposed a (stillborn) summit with the Italian squad during F1's summer break.

In December FOTA put its future existence to the vote, providing members with three choices: continue as is; downsize, providing services on a paid-for basis; and dissolution. The middle option got the majority nod.

FOTA members therefore have every right to be bemused by di Montezemolo's proposal, with cynics venturing that the August meet failed to materialise because it wasn't invented in Maranello. This perfectly encapsulates F1's biggest ill: inability of team bosses to

highest-placed non-CCB team, which tried in vain to retain Kimi Raikkonen, yet was forced to accept his defection to Ferrari in the wake of unpaid salaries.

During 2008-10, the very years di Montezemolo chaired FOTA, team unity delivered enormous benefits, not least a Concorde Agreement that treated all teams equally (save for Ferrari's 2.5 per cent premium) and equal say in a governance process that favoured the teams.

After Red Bull and Ferrari exited FOTA, the CRH/team dynamic shifted, largely due to their defections. Four teams are now said to be seriously endangered despite their pay drivers – and will remain thus until 2020. And there is no Concorde in place to define their rights.

Clearly, then, the answer to F1's current challenges lies not in calling *ad hoc* summits and endlessly debating cost controls, but in a united FOTA able to secure equal benefits revenues for all and, crucially, a stable future for a sport with uncertain leadership going forward.

This week in motorsport

Ex-F1 racers in frame for new electric series

Five former grand prix drivers have registered an interest in competing in Formula E when it kicks off later this year.

The series released the names of eight drivers who have "shown their support", with

Sebastien Buemi, Vitantonio Liuzzi, Takuma Sato, Lucas di Grassi and Karun Chandhok joined by IndyCar racer Marco Andretti, Audi DTM driver Adrien Tambay and ex-F1 reserve Ma Qing Hua.

None of the drivers are

guaranteed to race, but several already have ties to teams entered.

Series boss Alejandro Agag said: "It will be down to the teams to select who fills their seats. But we hope by offering them a 'pool' of top international drivers to choose

from, we can deliver on our promise of close, entertaining racing in city centres around the world."

The championship's Spark-Renault SRT_01E car was driven in public for the first time in Las Vegas earlier this week (pictured).



10

Kubica hails Janner Rally win

Robert Kubica says his Monte Carlo Rally warm-up win on last weekend's Janner Rally was one of the toughest of his career.

The European championship event was the Pole's first rally with new team M-Sport and his first run in a Ford Fiesta.

"I came here with a new car, a new co-driver [Maciej Szczepaniak] and into completely new conditions. You can imagine when you get already one new thing it's difficult; when you put them together it has been one of the toughest motorsport weekends of my career."



Onyx reforms for WTCC

Onyx Racing founder Mike Earle has reformed his team, which competed as a Formula 1 constructor in 1989 and '90, to embark upon the first of a five-year World Touring Car Championship programme in 2014.

The new team, run in partnership with Arlington Industries Group, has been working on its 2014-spec WTCC project for nine months, and plans to reveal the car and drivers 'shortly'.

Jordan is Red Bull Athlete

Reigning British Touring Car champion Andrew Jordan has been named as a Red Bull Athlete.

The 24-year-old, the first racing driver to join the scheme, will participate in various Red Bull events, although AUTOSPORT understands he will still race his Honda Civic with his Pirtek-based livery.

1973

Ferrari president Luca di Montezemolo has hinted that the marque could launch its first factory prototype programme since 1973, saying last month that a return to the Le Mans 24 Hours, in pursuit of outright victory, will come "sooner or later".



For all the breaking news, visit AUTOSPORT.COM

Prodrive eyes Dakar, Formula E

New Prodrive Motorsport boss John Gaw has targeted an expansion into Formula E and rally raids such as the Dakar.

The 42-year-old is also keen to initiate programmes in this year's FIA World Rallycross and Global Rallycross championships with the new Mini RX, a lighter and more powerful version of Prodrive's World Rally Car (pictured).



MCKLEIN/DE

Sauber man Sirotkin joins Fortec

Sauber Formula 1 test driver Sergey Sirotkin will drive for Fortec Motorsport in this year's Formula Renault 3.5 Series. The Russian, who

Sauber had initially hoped to promote to an F1 race seat, will partner Oliver Rowland. He finished ninth in his 2013 rookie campaign with ISR.



JOSEESPALLARGAS/ASM

Evans in M-Sport Fiesta test

Britain's Elfyn Evans kick-started M-Sport's week-long Monte Carlo Rally test last Sunday, driving a

face-lifted Ford Fiesta RS WRC the team plans to introduce for April's Rally Portugal.



LAVADINHO

In brief



STALEY/LAT

LEAL FOR CARLIN GP2

GP2 regular Julian Leal (above) will switch from Racing Engineering to Carlin for his fourth season in the series. The Colombian scored his first two podiums in the series last year, finishing second at Spa and third at Monza.

CAMPOS GETS PIC JR

Formula Renault 3.5 graduate Arthur Pic will make his GP2 debut this season. He is the first driver to join Campos Racing, which returns to the series in 2014 after taking over the Addax squad's entry.

ANDY GRANATELLI DIES

Former STP CEO and Indianapolis 500 legend Andy Granatelli passed away at the end of last year, aged 90. Prior to rising to prominence with STP, Granatelli ran an auto shop with his siblings, and became a race promoter during WWII.

PREMAT OUT OF GRM

Frenchman Alexandre Premat has split with the Garry Rogers Motorsport V8 Supercars team to "explore other avenues". The 31-year-old, a former Audi DTM driver, finished 19th in last year's championship. Will Davison, meanwhile, will switch from Ford to Mercedes after signing a multi-year deal with Erebus.

NOVIKOV SKIPS 2014

Evgeny Novikov will skip the 2014 World Rally Championship after failing to secure a deal for the coming campaign due to budget issues. The 32-year-old became the first Russian to win a WRC stage and to finish on the podium in 2012.

BRIT BACK TO TRS

Nissan GT Academy protege Jann Mardenborough will return to the Toyota Racing Series this weekend with Giles Motorsport. Mardenborough, third in LMP2 in last year's Le Mans 24 Hours, secured the rookie TRS crown last year.

SERRALLES AT WEST-TEC

Formula 3 European Championship ace Felix Serralles has become the first driver named by Team West-Tec for the squad's first year in the series. The 21-year-old Puerto Rican raced with Fortec Motorsport last season.



STALEY/LAT

Nissan to place drivers with Muscle Milk

Nissan will place drivers with Muscle Milk/Pickett Racing in each of the United SportsCar Championship enduros as part of its global exchange programme. Alex Brundle (above) will make his Daytona 24 Hours debut with the team's ORECA-Nissan this month, while a Nissan-affiliated driver will join team regulars Klaus Graf and Lucas Luhr at the Sebring 12 Hours and Petit Le Mans.



The Endurance Rally Association
Home of the Peking to Paris Rally



Thunder down Adventure Road

The next Peking to Paris Motor Challenge will be held in the summer of 2016 - less than three years to prepare for a ripping great adventure.

The greatest wilderness on earth that can be crossed by motor car takes you from the fringe of the Gobi Desert to the Altai Mountains of Southern Siberia. Get that far and you have just driven the most sensational ten driving days you could ever wish to experience: the crossing of Mongolia.

Bring a car that is blessed with dead-simple engineering. Hit it with a

hammer in a blacksmith's shed beside the road where they repair old trucks, come out with new leaf springs and a refreshed chassis. Thunder on some more. The clock is ticking against you every day.

Backed up by the most experienced team of rally mechanics, who sweep the route and work all night to keep you going, come and dine out with everyone

else in a giant marquee, fed by chefs who even have to truck in the wood for the fire (Mongolia has no trees)... sleep beside mountain streams and vast inland lakes. Drive wide open prairies on virgin glassland, keep the sun on your back and you must be heading West... you are now in the wheeltracks of Prince Borghese and the original 1907 Peking to Paris. There is nothing else quite like it.

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The inside line

Ex-F1 medical delegate – and consultant anaesthetist and A&E physician – analyses reports of Michael Schumacher's condition



Let's take a look at what's happened to Michael Schumacher, from his fall until roughly now. It goes without saying that this is based on what we've been told at the press conferences, viewed and interpreted through my eyes. I will not speculate, but will rather read between the caring physicians' lines and put this into the context of the treatment of severely head-injured patients.

It's useful to think of the impact against the rock as having done two things: it essentially immediately created a series of severe lesions, and it set into motion processes that, left to themselves, would aggravate the damage already done.

What about the initial lesions? There were probably at least four types of injury produced by the fall.

The first is formation of haematomas. Torn and damaged blood vessels let blood escape in sufficient quantity to coalesce. They are dangerous both because they are markers of severe impact as well as because they cause the intracranial pressure (ICP) to rise. We've been told that Michael had a right-sided extradural haematoma (between the skull and the dura, a membrane surrounding the brain) that was evacuated surgically a week last Sunday, and a series of intracerebral (within the brain tissue itself) haematomas. One of these, on the left, was evacuated last Monday, but there are several others, located on the left, on the right and in the centre.

The second type of injury is contusions. These are

brain. The problem is, when the brain isn't receiving enough blood, what do you think it does? Right – it swells. This aggravates the already high ICP, and the already low blood flow.

Taking care of severely head-injured patients involves rigorous adherence to a few principles. Basically, the brain needs to consistently receive adequate amounts of oxygen and nutrients. For this to happen, the air passages are maintained open and secure by a tube placed in the windpipe. Oxygenation and ventilation are provided by sophisticated ventilators, and adjusted to values as close to normal as possible. In order to ensure proper brain blood flow, it is urgent to control elevated ICP.

The first step in controlling high ICP was done on the Sunday and Monday after Schumacher's accident. The surgically accessible haematomas were evacuated. In addition, the bone flaps opened by the surgeon weren't closed, allowing the brain to physically swell a bit before the pressure rises.

It turns out that cooling the patient just a few degrees can help make sure that energy delivery is adequate. This is because cooling slows the brain's metabolism. That means that any given level of oxygen and nutrient delivery is more likely to be sufficient for the brain's needs. Hypothermia is also very effective against elevated ICP.

It's also important to understand what is meant by, and the role of, the 'medically-induced coma'.

“Bone flaps opened by the surgeon allow the brain to swell a bit before the pressure rises”

bruises, just like when you bang your arm or leg. Tiny quantities of blood seep from the vessels, but not enough to collect. This gives that black-and-blue look. There's also swelling of course, which adds to the ICP increase caused by the haematomas.

Third is the possibility of damage to the long 'cables' in the brain. Injury to these axons is harder to see with modern imagery, but is often associated with poor neurological outcome.

Last, I have heard insistent stories of damage to one of the four arteries feeding the brain. Even if true, the significance of this is hard to assess, as most people have extensive connections between the four arteries, allowing flow through one to compensate for blockages in another.

What about the vicious circles I alluded to above? The most important revolves around the ICP. Increased ICP compresses the tiny blood vessels nourishing the

I mentioned controlling the airway with a tube in the trachea, controlling breathing with a ventilator and reducing body temperature. Now, realistically you just can't do this to a patient, even a severely head-injured patient (*especially* not a head-injured patient!) without anaesthetising them. So all these patients are put to sleep. This also helps ensure that the patient doesn't shiver during the period of hypothermia (usually 48-72 hours).

If despite all the above the ICP stays elevated, the anaesthesia is deepened significantly. This aims at temporarily abolishing electric activity in the brain, in order that all available energy be used for vital cellular maintenance, not 'superfluous' activity.

The future? A long, long road. Months at least. Short term, the anaesthetic needs to be lightened when the ICP is normal and stable. That's the next big step. ✎
Follow Gary on Twitter at @former_f1doc

F1 2014

In 2014, Formula 1 gets a new look, and a new sound, with a major regulation change built around

REAR WING

The beam wing is gone

DRS

Opens 15mm wider than previously

TURBO ENGINE

1.6-litre turbocharged V6 engines replace the old 2.4-litre V8s

ENERGY RECOVERY SYSTEM

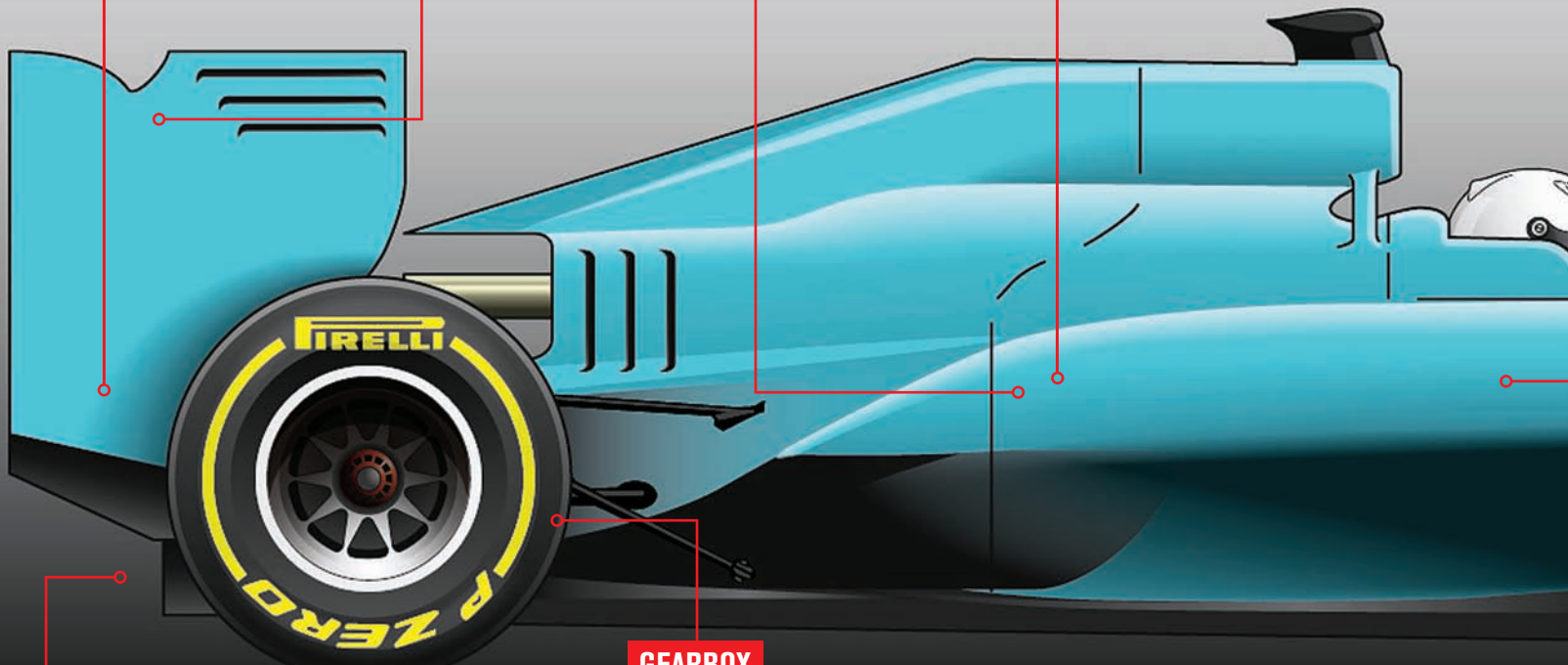
Both kinetic (from the brakes) and heat (from the turbocharger) energy is recycled for a more powerful green energy system

EXHAUST-BLOWN AERO GONE

New exhaust-pipe regulations outlaw exhaust blowing

GEARBOX

Eight-speed gearboxes make their debut



014

new engines. GARY ANDERSON, CRAIG SCARBOROUGH & EDD STRAW reveal it all

SIDEPODS

New crash structure and cooling demands mean bigger sidepods

MINIMUM WEIGHT

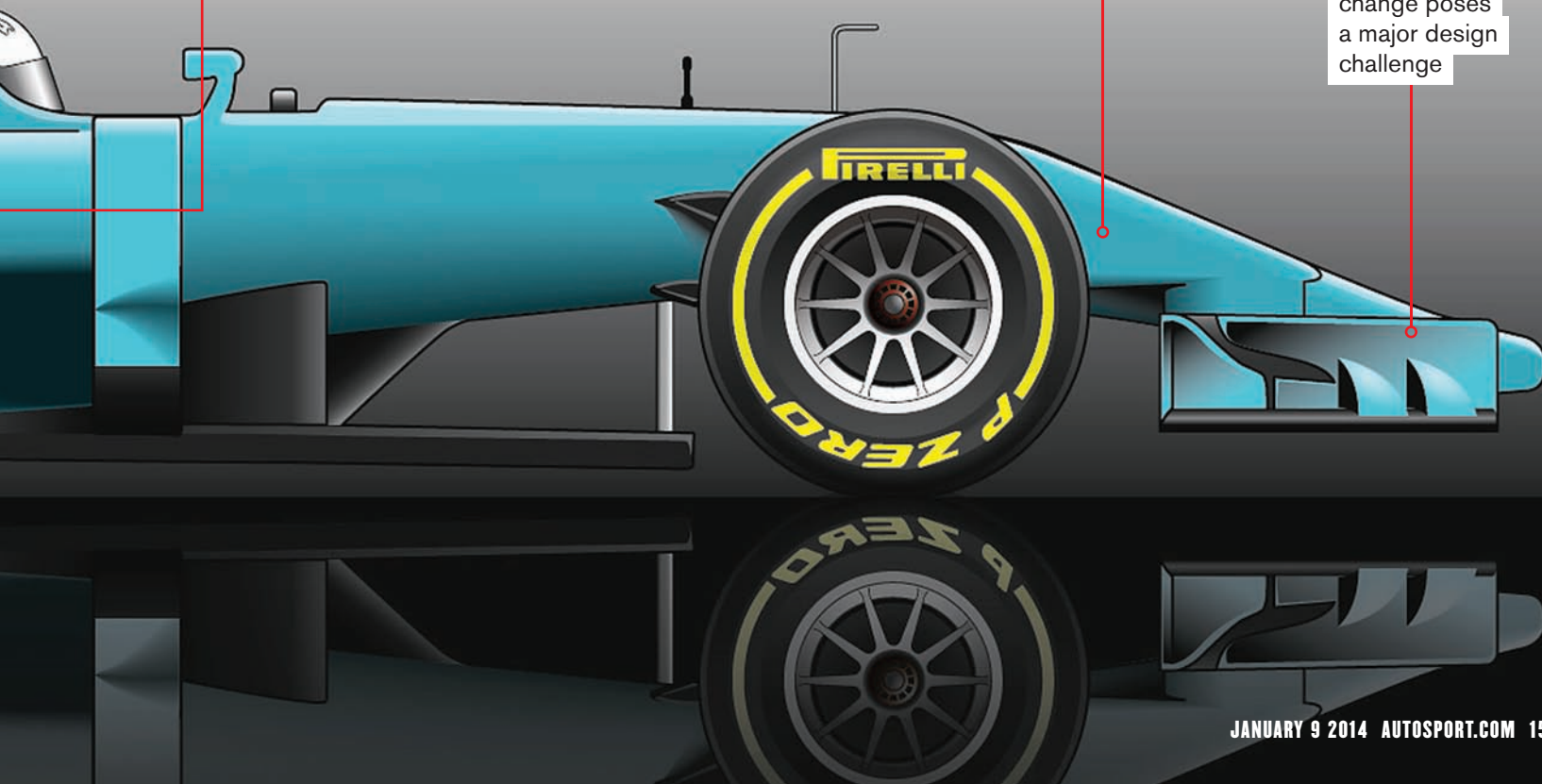
Increased from 642kg to 690kg

UGLY NOSE

New rules designed to get the nose of the cars lower

FRONT WING

Narrower, this change poses a major design challenge





F1's power unit powerplay

16

RENAULTSPORT F1

For the first time since Alain Prost won the 1988 Australian Grand Prix, the Formula 1 grid will feature turbocharged cars in 2014. But this change is vastly more complicated than simply running a smaller-capacity engine fitted with a turbocharger. So dramatically different is the new power unit, as it should be more properly called, that it will transform the nature of grand prix racing.

New engine formulas in F1 are nothing new. Over the years, there have been numerous changes, most recently the switch to 2.4-litre V8s for 2006. But there has never been so seismic a shift, with the replacement of the old KERS with energy-recovery systems that offer twice the power boost for up to five times longer per lap. This, combined with a draconian fuel limit, is designed to make F1 engine regulations more road relevant and environmentally-friendly and poses a huge challenge to achieve the necessary performance levels and efficiency to thrive.

ENGINE CONFIGURATION

The engine itself is a 1600cc (+0/-10cc), 90-degree V6 engine with a sole, single-stage

turbocompressor. There is no limit to the boost pressure, although it is unlikely any manufacturer will go beyond 3.5 bar, while the pistons must be 80mm in diameter with a fixed spacing. The result is a much smaller bore than the 98mm that had become standard in F1.

The engine plus the turbo is expected to produce in excess of 600bhp, which will be supplemented by 160bhp from the energy-recovery systems.

DIRECT INJECTION

The regulations dictate direct injection must be used. This is key to the need to maximise the fuel efficiency of the new engines. Direct injection means that the fuel is jetted into the combustion chamber rather than via an inlet before the valves. A very precise fuel/air mixture can be created in the cylinder to maximise performance and prevent waste.

REV LIMIT

The previous-generation V8s were limited to an 18,000rpm maximum. The 2014 engines must not exceed 15,000rpm, although the torque characteristics of the engine mean that often drivers will be changing gear well before hitting the limiter.

“A draconian reduction in the amount of fuel that can be used has been mandated”

100KG FUEL RESTRICTION

With increasing fuel efficiency one of the key objectives of the 2014 regulations, a draconian reduction in the amount of fuel that can be used during the race has been mandated. This 100kg limit adds up to a reduction of around one third compared with what teams started races with last year.

Article 29.5 of the sporting regulations states that: “no car is permitted to consume more than 100kg of fuel, from the time at which the signal to start the race is given to the time each car crosses the line after the end-of-race signal has been given.”

The penalty for exceeding this

limit is exclusions, except in cases where stewards accept *force majeure*.

FUEL-FLOW LIMIT

The peak fuel flow must not exceed 100kg per hour once the engine is at 10,500rpm or more. There was no fuel-flow limit previously, but Renault quotes 170kg/h as a typical ceiling. Below this, a formula ensures that the fuel flow remains in line with rpm. This has been introduced to prevent massive bhp output thanks to there being no cap on boost pressure.

“There is a fuel-flow limitation, so in terms of pure performance there should not be so big a difference between the manufacturers,” says Ferrari head of engine and electronics Luca Marmorini. “But the way you use the power unit will make a big difference. I expect there will be big differences in the way we use it.”

EFFICIENCY

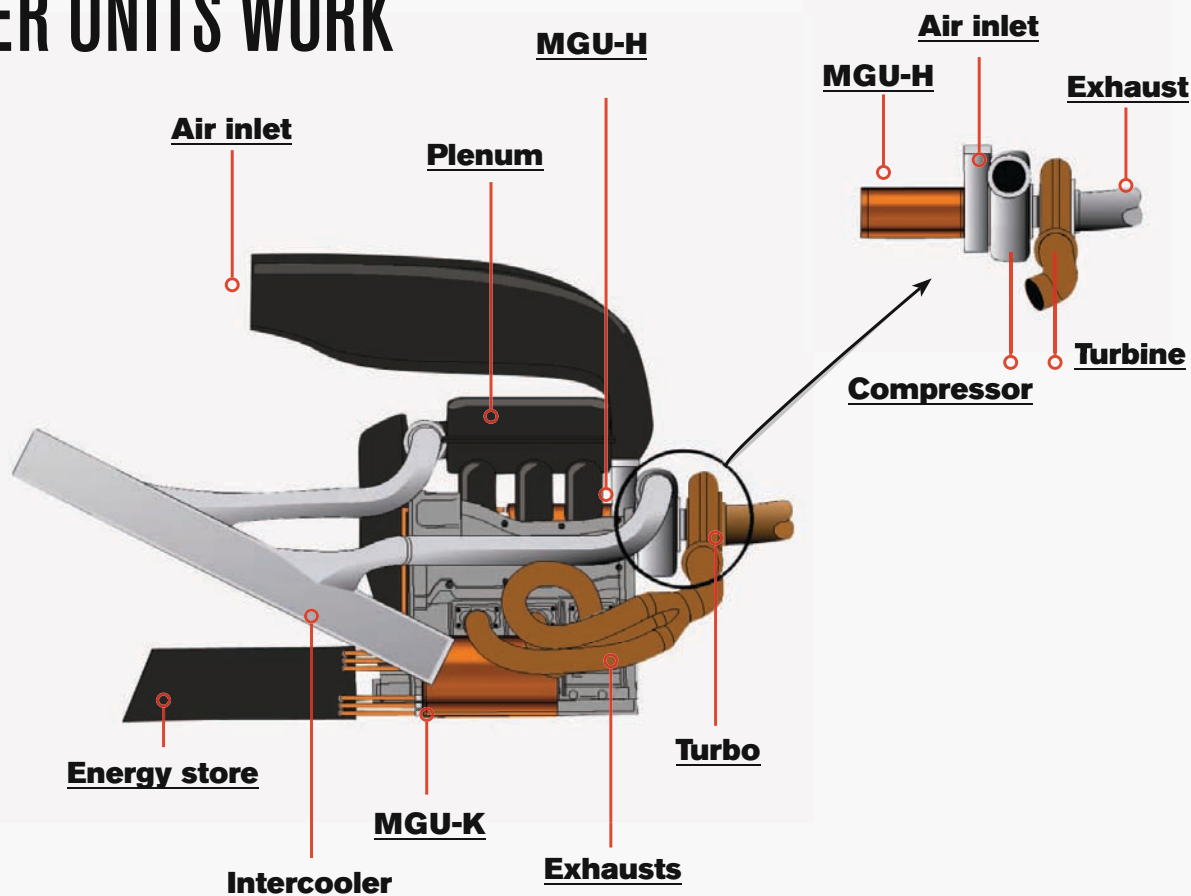
Fuel efficiency will be paramount. If you can set your engine to run leaner, you'll be able to run with more turbo boost, which means you will get more pressure in the cylinders and, as a result, more power. It's doubtful there will be major differences in the internal

HOW POWER UNITS WORK

How it all fits together

While the internal combustion engine itself is a relatively conventional 1.6-litre V6 turbo, albeit pushed to the limit in terms of parts and performance, it's the addition of the energy-recovery systems, explained in more detail overleaf, that makes this more than just 'another' Formula 1 engine.

The diagram shows the layout of the engine, including the energy store and the two motor generator units that will be key to performance and efficiency. The way energy is reclaimed from the turbo via the turbine that propels the MGU-H will likely be the key to which manufacturer is the best performer.



CRAIG SCARBOROUGH

combustion engines of Renault, Mercedes and Ferrari themselves because the understanding will always be there.

But the energy-recovery systems will be essential in achieving the necessary efficiency to run competitively throughout a race (for more detail, see page 18). In extreme cases, this could mean that one manufacturer has the advantage on single-lap pace, but plummets in the race because of a need to manage fuel-loads.

“There will be a reasonable change from what we have been used to,” explains Ferrari’s engineering director Pat Fry. “There is likely to be one second or more difference in the pace between cars running in qualifying spec and those running fuel- and energy-limited. We will need to decide when is the right time to go flat out and when is the right time to be saving fuel, so it’s going to be a game of strategy much more than it has been so far.”

ENGINE PENALTIES

Last year, each driver had eight engines to last the season. In 2014, each will get only five of the new power units before they start to incur grid penalties. But it’s not quite that straightforward.

The power unit is divided into six elements. Each driver gets five of each, which can be used interchangeably throughout the season. They are:

- 1 The internal combustion engine
- 2 Motor generator unit-kinetic (MGU-K)
- 3 Motor generator unit-heat (MGU-H)
- 4 Energy store
- 5 Turbocharger
- 6 Control electronics

Once a driver has used up five of one of those elements, they will be hit with a grid penalty for any subsequent ones used.

The first time a sixth of any elements is used, it will trigger a 10-place penalty. Each time any of the remaining elements is used for a sixth time, the punishment will be a five-place penalty.

The first time a seventh of any element is used, it will again trigger a 10-place penalty with five for other seventh elements. The pattern of a 10-place penalty for the first extra element in each round and five for subsequent ones will continue.

If a grid penalty cannot be completed because a driver is too far down the grid, the remainder of it will be carried forward for one more race.

A BRIEF HISTORY OF F1 ENGINE REGULATIONS

The move to 1.6-litre turbocharged V6 powerplants is just the latest in a long line of changes to Formula 1’s engine formulas.

1947-1953
First F1 rules allowed 4.5-litre normally-aspirated or 1.5-litre supercharged units. In '52 and '53, the world championship was run to Formula 2 regulations because of a lack of proper F1 machinery.

1954-1960
F1 is relaunched with 2.5-litre engines, with the unappealing option to run 750cc supercharged units.

1961-1965
Small-capacity 1.5-litre normally-aspirated engines introduced.

1966-1986
F1’s longest-running engine formula is introduced, allowing 3-litre normally-aspirated

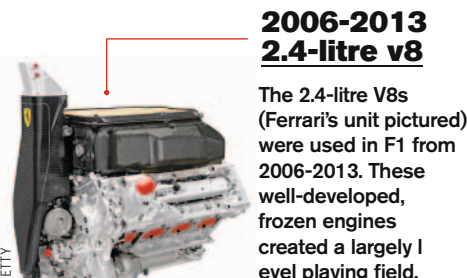
engines or 1.5-litre compressed engines. It was not until 1977 that Renault became the first to use turbos.

1987-1988
With a long-term plan to phase out the turbos, normally-aspirated engines are increased to 3.5-litre capacity.

1989-1994
Turbos are banned, leaving only 3.5-litre normally-aspirated engines.

1995-2005
Engine capacity reduced to 3000cc, with restrictions eventually permitting just V10s.

2006-2013
Engine capacity reduced to 2.4-litre, with a switch to V8 configuration.



GETTY

Energy Recovery Systems

More power for longer

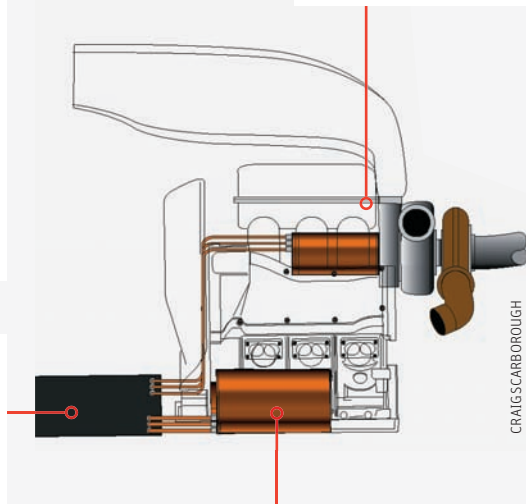
KERS, used in F1 in 2009 and from 2011-13, harvested energy under braking and allowed 60kW (80bhp) to be deployed for just under 6.7s per lap. In 2014, the MGU-K can deploy 80kW (160bhp) for five times as long.

Energy store

The energy, which is located under the fuel cell, must be a minimum of 20kg and a maximum of 25kg. This is counted within the overall engine minimum weight of 145kg. It can store four megajoules of energy and will most likely be made up of lithium ion batteries.

MGU-H

The MGU-H (motor generator unit-heat) is attached to the turbocharger and harvests energy from the rotating turbine shaft. This energy can be stored in the battery, or sent to the MGU-K for immediate use. The MGU-H can also control the speed of the turbocharger to match the rpm of the engine.



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MGU-K

The MGU-K (motor generator unit-kinetic) is used to harvest energy recovered under braking and provides an extra 120kW (160bhp) of power on demand for just over 30 seconds per lap. It is connected to the engine crankshaft.

EXPERT VIEW



Gary Anderson
Technical consultant

The MGU-K is well-known technology, despite the bigger battery and doubling of power to 160bhp, but the big development challenge is that you are allowed heat recovery by putting an electric motor (MGU-H) in the turbo.

The energy recovered can be used to recharge the battery pack, but any power it makes can also be used on top of the maximum powerflow (4MJ/lap) from the battery pack. So you can port that energy directly into the engine as an extra. All of this will be

done electronically, so the driver no longer needs to press a button.

This electrical torque can be used to produce a smoother torque curve and an easier throttle pedal to control. All this talk of wheelspin is exaggerated as the drivers will simply apply the maximum torque the rear tyres can take.

You will also see that in some slow-speed corners, the cars will use only electrical torque because that's good for fuel consumption.

Front wing

From 2009 to '13, the front wing was as wide as the car at 1800mm. In '14, this is reduced by 150mm to 1650mm. While still wider than the previous generation of cars, which had front wings of 1400mm in width, it is a significant change. The FIA-proscribed 500mm wide 'neutral' section at the centre of the front wing remains unchanged, meaning that once again development of the multi-element outboard section of the front wings will be the main battleground.

The CFD analysis shows that while the majority of the airflow will still be turned around the wheels, some will have to go inside the front axle and rejoin the main airflow behind the wheels. This has a significant impact on airflow down the car.

Gary Anderson Technical consultant

"The front wing is effectively moved in by 75mm on each side. The endplate alters slightly in geometry, and overall it will be a critical change. Last year, because the wing was as wide as the front wheels, you had a linear effect on the airflow coming off it when you applied steering lock. In 2014 this will be very different.

You would expect teams to be more aggressive in trying to turn the air around the outside of the wheels, but there will probably be a little bit more going inside them. The key will be getting the air to join up quickly behind the wheel. The voids behind the four wheels account for about 35 per cent of the drag of an F1 car, so you want the airflow to fill that as quickly as possible. But what will really make or break your car will be how you manage the airflow when you apply steering lock, ranging from around three degrees in fast corners to about 12 degrees for a hairpin."

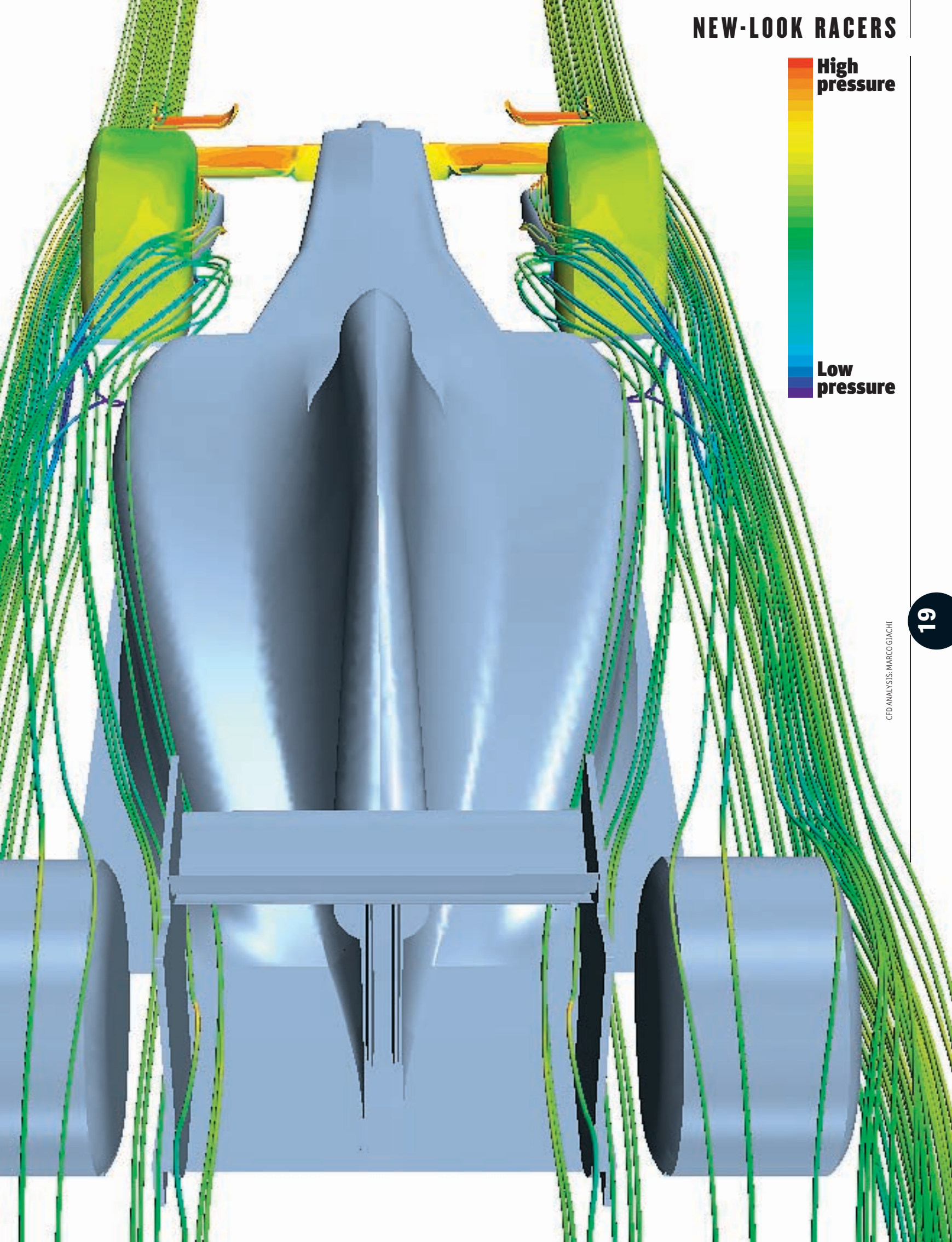
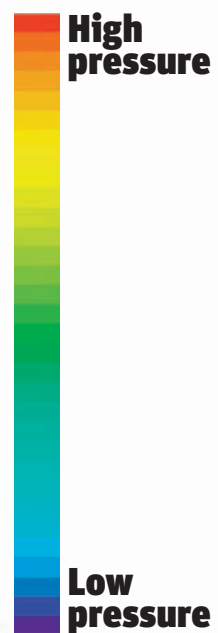
"Voids behind the wheels account for 35 per cent of drag; you want the airflow to fill that quickly"

James Allison Ferrari technical director

"Probably the hardest thing [aerodynamically] will be the front-wing-endplate change. It was an innocent little change when we dreamed it up, and when it was voted for in the Technical Working Group it was just to make the front wings a little less vulnerable to hitting one another at the start or up against a barrier because they were the same width as the tyres. So the front-wing span was reduced. But it has made a lot of developments of the past few years on the front-wing endplates semi-obsolete. Reinventing that from scratch and doing a good job of it will be a challenge for all teams."

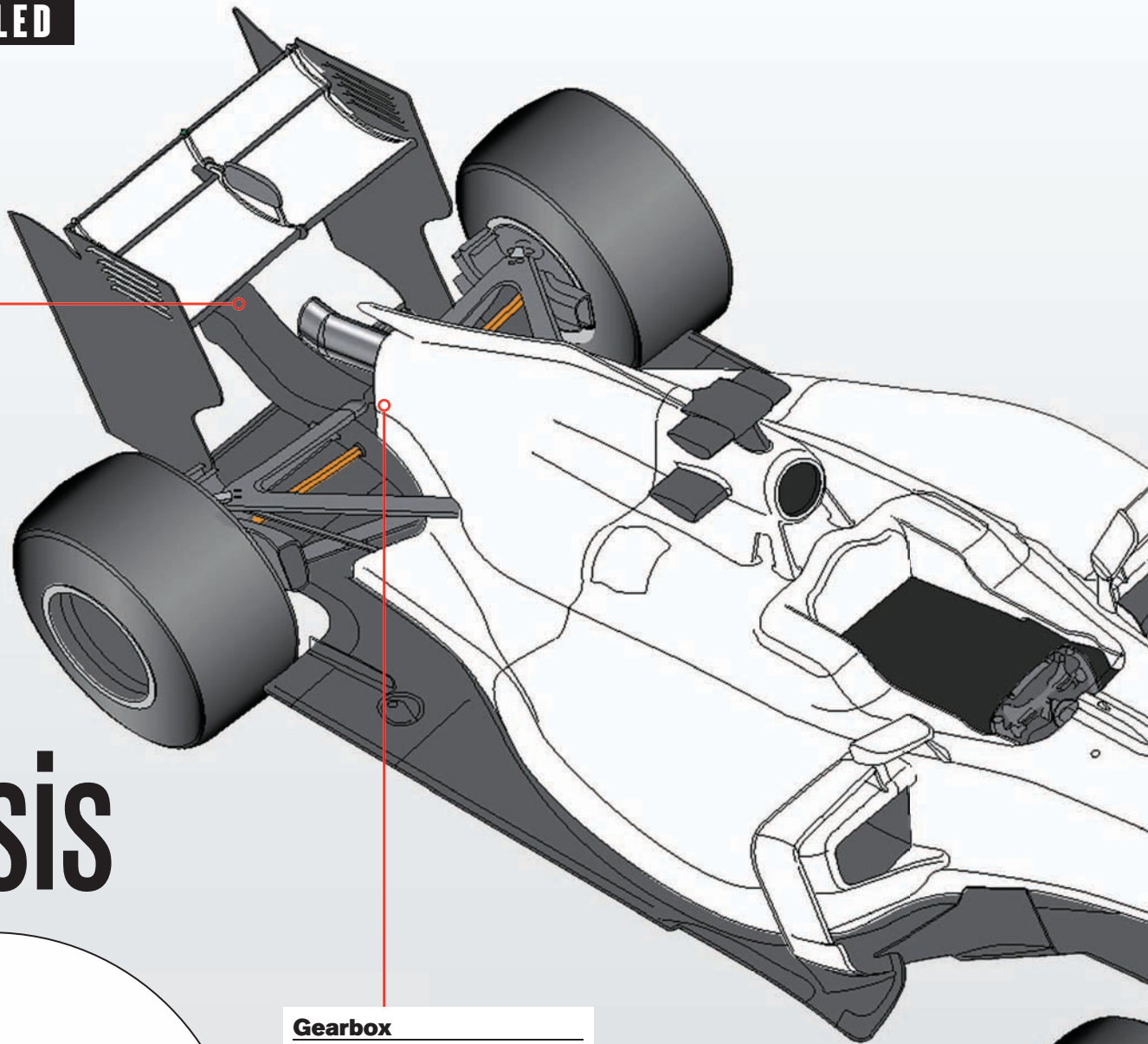
Andrew Green Force India technical director

"It's a massive change considering it's such a small dimensional change. Everything about the car is set up aerodynamically by the front wing – it's how we set the structures up and how they interact with each other. The issue with the front wing is that it's right in front of the front tyres, and a lot of our structures move outside the front tyres. By making the front wing narrower it gets harder and harder to get these structures to go around the outside of the tyres. We've been working on that for a long time, so we are well down the path of regaining what we lost – that was a big challenge with the 2014 regulations."

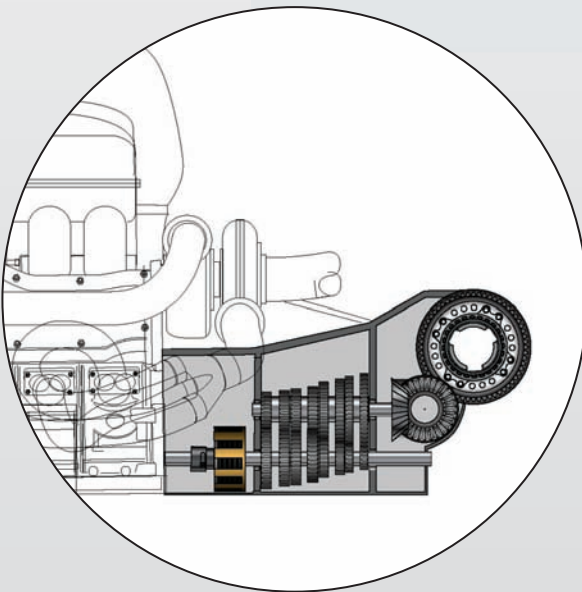


Exhaust position

To eliminate exhaust-blown downforce, the 2014 regulations stipulate a single tailpipe exit of 7500mm² to 14,000mm². The last 150mm of the tailpipe must be located 350-550mm above the reference plane, no more than 100mm from the car centre line and 170-185mm behind the rear-wheel centre line. No bodywork is allowed close to it, to prevent the gases being used to generate downforce.



Chassis



Gearbox

F1 gearboxes will have eight forward ratios for the first time in 2014. These gear ratios must be selected before the start of the season, with teams forced to use the same ones throughout the year. But for 2014 only, each team will be allowed one 'joker' change of their fixed gear-ratio sizes during the season. Previously, teams had to nominate 30 gear ratios before the campaign started and select a maximum seven to run at any one time.

Minimum weight

The minimum weight has been increased from 642kg in 2013 to 690kg in 2014.

SPORTING REGULATION CHANGES

Aside from major changes to the cars and engines, a raft of modifications has been made to F1's rules of competition

SUPERLICENCE PENALTY POINTS (ARTICLE 4.2)

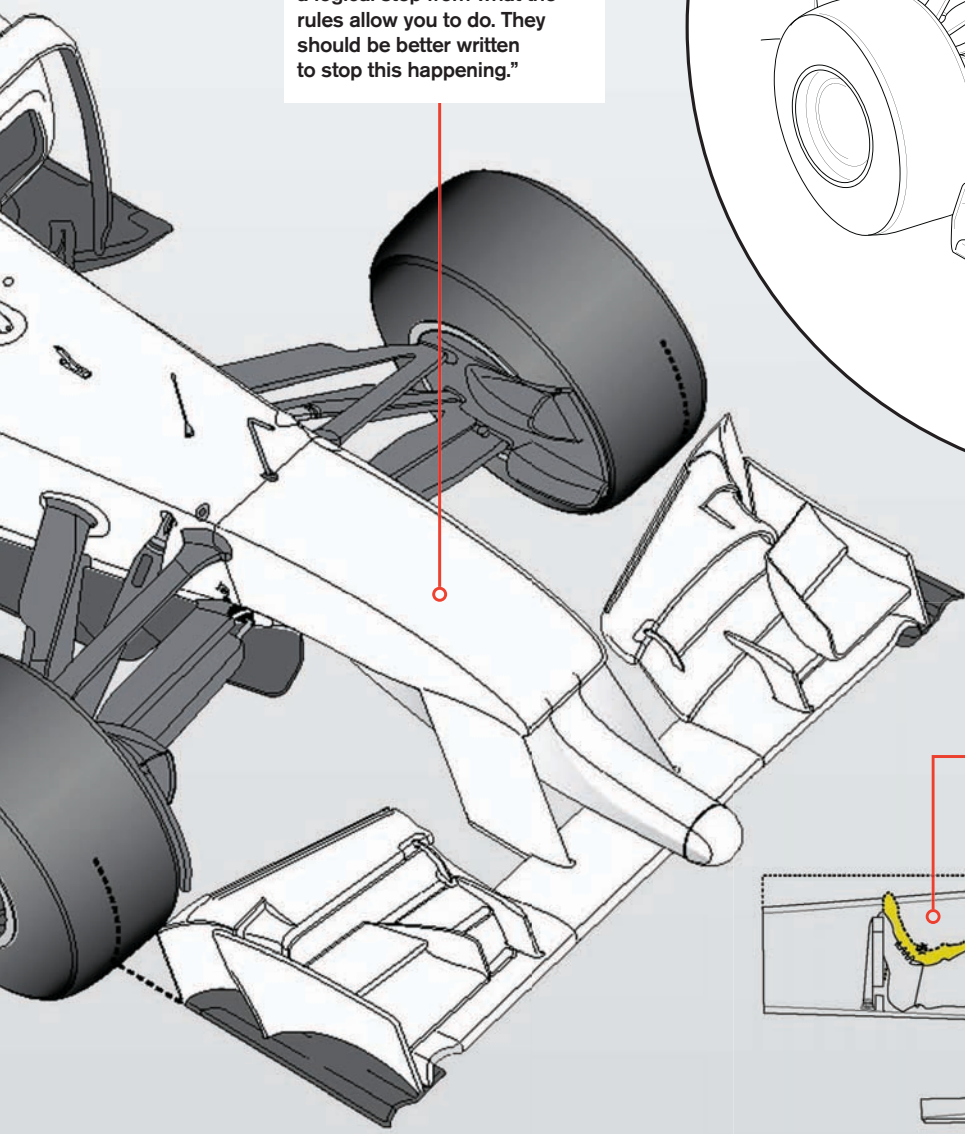
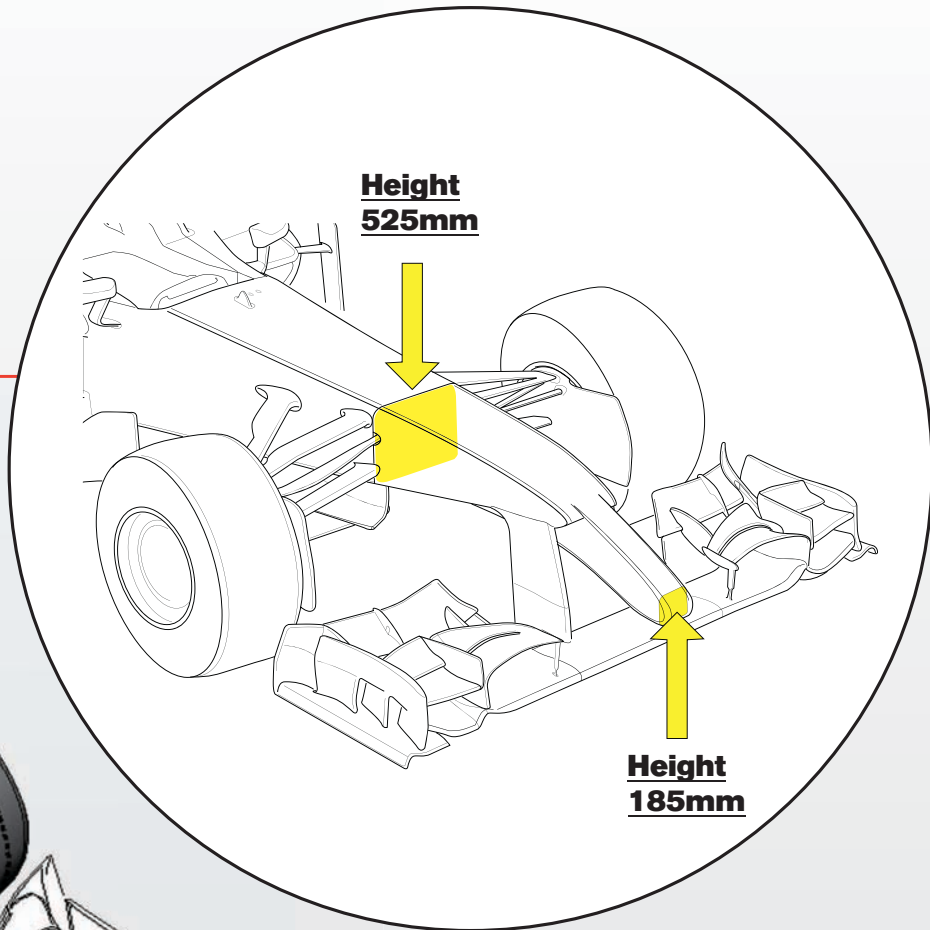
From the start of 2014, F1 drivers will accumulate penalty points for misdemeanours.

Just as with a British driving licence, points are earned for breaking rules, such as causing collisions, but only when a driver hits 12 points will there be a penalty. If a driver picks up 12 points over a 12-month period, they will be given an automatic one-race ban. This means only serial offenders will be punished.

Ugly nose

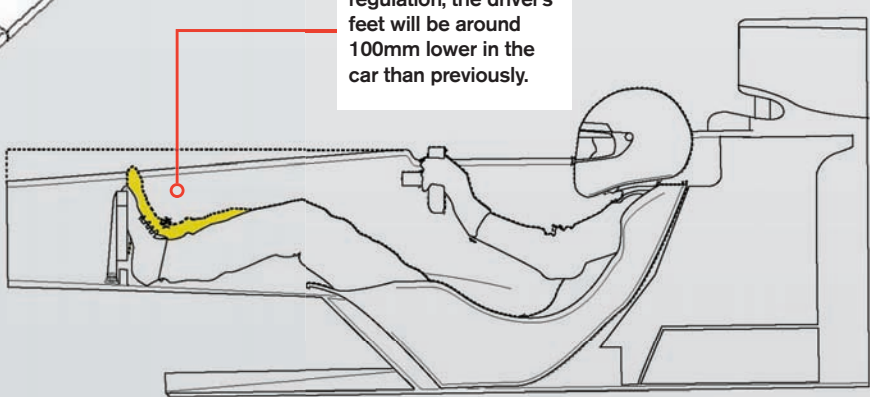
The unsightly nose designs expected in 2014 are a consequence of the necessity to maximise the airflow under the car. The front bulkhead of the chassis is lowered to a height of 525mm, while the front of the nose has to be at a height of 185mm (measured 50mm back from its tip), down from 550mm.

Gary Anderson: "This design is a logical step from what the rules allow you to do. They should be better written to stop this happening."



Feet position

Because of the change in nose-height regulation, the driver's feet will be around 100mm lower in the car than previously.



DOUBLE POINTS FOR SEASON FINALE
(ARTICLE 6.4)

The final round of the 2014 season, the Abu Dhabi Grand Prix, will award double points to both drivers and constructors. This rule change is almost universally hated given that it privileges one race over the other 18 but, while it is included in the rules, there is scope for it being changed, for better or worse.

"My preference would be for the final three races to be worth double points," Bernie Ecclestone told *The Daily Telegraph* last month. "But it may be that the rule is cancelled altogether at the next [F1 Strategy Group] meeting in January."

It will be the first time one race has offered more points than any other.

POLE POSITION TROPHY
(ARTICLE 6.7)

The driver claiming the most pole positions during a season will be awarded the new trophy.

Sebastian Vettel would have won the trophy in four of the past five seasons, with Lewis Hamilton taking it in 2012 thanks to his seven pole positions for McLaren.

Should there be a tie, the trophy will be awarded based upon countback to second places and so on until a winner has been established.

EXTRA DRIVERS ON FRIDAY (ARTICLE 19.1)

Teams will now be allowed to run more than one driver per car during Friday practice sessions. This will allow reserve drivers some running without preventing race drivers from sitting out the entire session. An extra set of the harder (prime) compound tyres has been given to teams exclusively for use during the first 30 minutes of the Friday morning session to ensure track activity in the first third of running.

Originally, the idea of extending the first session by 30 minutes had been floated, but this would likely have led to the track being quiet for the half-hour that followed.

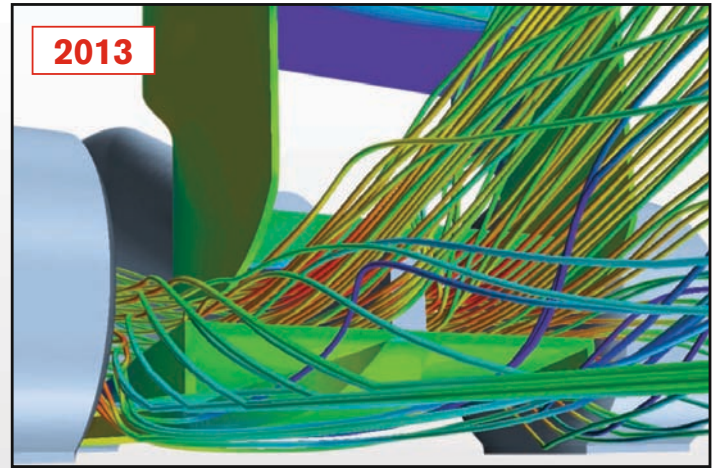
This rule change means each driver now has seven sets of prime rubber and five options for the grand prix weekend, with three of each compound reserved for use during qualifying and the race.

Rear wing

The beam wing is abolished, which as our CFD analysis shows makes a big difference to the downforce produced. The 'box' in which the rear-wing profile is located is 20mm smaller in terms of height, meaning the wing is slightly shallower. The size of the slot gap when the DRS is opened has also increased from 50mm to 65mm.

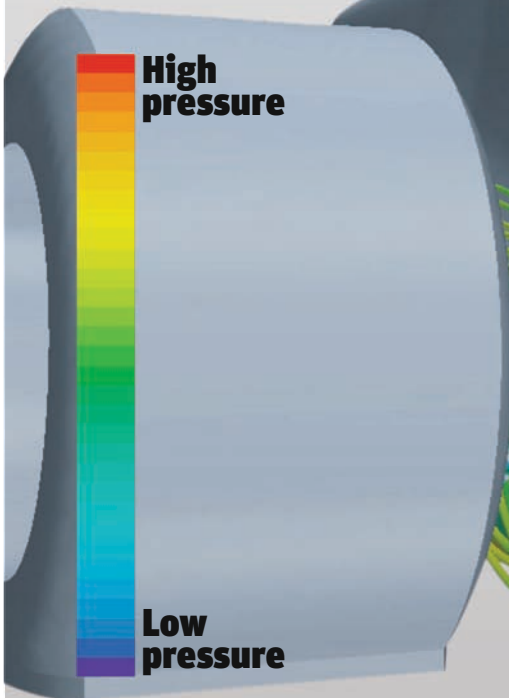


Gary Anderson: The rear wing depth is reduced fractionally but that will only be relevant at places like Monaco or Hungary where you run maximum downforce. The beam wing has gone and that has been taken away to reduce drag. Some people will mount the rear wing on pillars and some have been looking at developing the floor to be stiff enough to carry the rear wing, but that's going to be difficult to do. I would expect most teams to go with pillars.



2013

2014



High pressure

Low pressure

22

CFD ANALYSIS: MARCO GIACCHI

EXCEEDING TRACK LIMITS (ARTICLE 20.2)

Article 20.2 of the sporting regulations has been tweaked to include the discretionary ability of the FIA race director (Charlie Whiting) to order a driver to cede an advantage rather than serve a penalty. This is effectively in place of the mooted five-second penalty to allow a less draconian punishment than the usual drive-through penalty.

The idea of bringing in a milder five-second penalty to avoid drivers having their races ruined for minor misdemeanours was floated, but no means to apply such a penalty without simply adding it to a driver's race time and distorting the race could be agreed.

Drive-through penalties can still, however, be issued.

PERMANENT NUMBERS (ARTICLE 21.2)

Since 1996, F1's numbers have been assigned based on the previous year's finishing position. Whichever team employs the world champion driver runs #1 and #2, with the remainder (save for 13) awarded based on constructors' finishing order.

For 2014, each driver has been asked to select their own number, which they will retain for the rest of their F1 career. The #1 will be available on a year-by-year basis

for the reigning world champion.

All drivers have been asked to select their first three choices of number, in order, from 2-99, with preference being given to whoever finished higher in the previous year's championship where there are number clashes.

Several drivers have already revealed their first choices. Fernando Alonso has gone for #14, which he carried in karting, while Nico Rosberg favours the #6 that his father, Keke, took to the 1982 world championship.

IN-SEASON TESTING (ARTICLE 22.6)

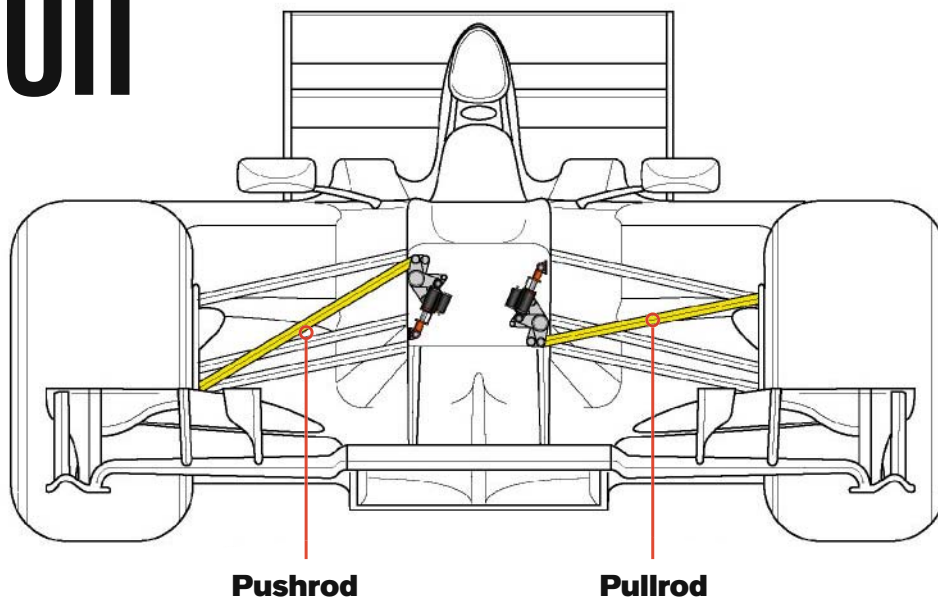
Major changes have been made to F1's testing rules. This year, four two-day tests will be held on the Tuesday and Wednesday following the Bahrain, Spanish, British and Abu Dhabi Grands Prix. One of these eight days must be allocated to tyre testing for Pirelli.

The number of days of 100km promotional running has also been reduced from a maximum of eight to just two days.

Suspension

The front suspension regulations remain the same, but there could be some changes to better suit the anticipated tyre characteristics and the effect of the front-wing rules on the airflow at the front of the car.

Gary Anderson: The only thing you might see change at the front of the car is more people going to the pullrod suspension, or even those who have made the switch, such as Ferrari, going back to the pushrod design. I am not a big lover of the front suspension geometry that proliferates because if you look at the front tyre as it loads up in the corner, it's not helping the tyre work even though there is aerodynamic advantage.



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Cooling

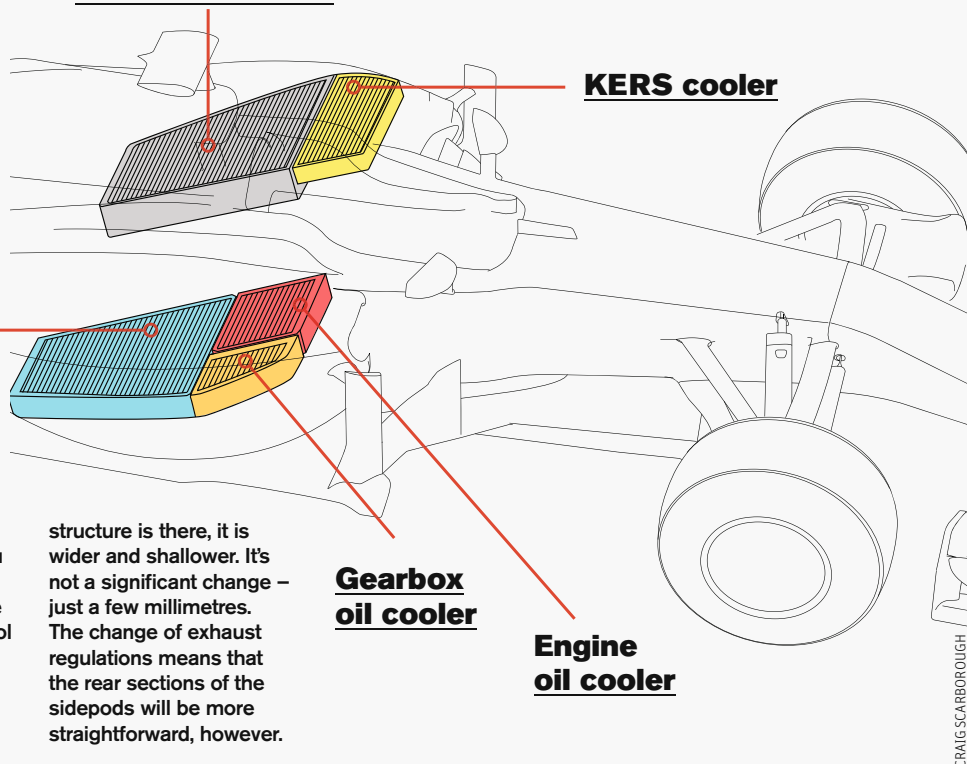
There are no significant regulation changes that directly affect the sidepods, but the different cooling demands of the new engines, combined with the need to incorporate the new standard side-impact crash structure, mean that they are likely to be a little wider in 2014.

Gary Anderson: The sidepods will change slightly. The crash structure is a bit longer and everyone has to use the same structure which has been developed by several teams to stop everyone repeating the same research. But you

Engine water radiator

want a wider sidepod anyway because while you need less water and oil radiator area, you will have the intercooler there to cool the charge pressure. You will have a bigger battery pack cooling requirement, too. Because the crash

Turbo intercooler



structure is there, it is wider and shallower. It's not a significant change – just a few millimetres. The change of exhaust regulations means that the rear sections of the sidepods will be more straightforward, however.

CRAIG SCARBOROUGH

UNSAFE-RELEASE CLAMPDOWN (ARTICLE 23.12)

Unsafe releases during races shot to the top of the safety agenda when FOM cameraman Paul Allen was struck by a wheel shed by Mark Webber's Red Bull after a pitstop during the Hungarian Grand Prix. That led to restrictions on camera crews and photographers in the pitlane.

This year, the governing body has moved to punish unsafe releases more harshly following a spate of incidents during recent seasons.

The regulations now allow stewards to give grid penalties for unsafe releases during practice. Unsafe releases during the race will be punished with a 10-place grid penalty, on top of any in-race punishment such as a drive-through penalty for the team involved.

SIX-RACE GEARBOXES (ARTICLE 28.6)

Since the start of 2011, gearboxes have had to be used for five consecutive events. This year, that number is increased to six. Drivers retiring from a race will be allowed a new gearbox for the following race regardless of where they are in their six-race cycle.

WINDTUNNEL/CFD RESTRICTIONS (APPENDIX 8)

Both windtunnel and CFD work are heavily restricted, with aerodynamic testing cut to around a third of the previously allowed levels. A formula is used to calculate the permissible level for combined windtunnel and CFD work during an FIA-defined, eight-week aerodynamic testing period.

This formula allows a total of 30 units of work during the period. In the case of windtunnel, this is 30 hours of 'wind-on' time when data can be gathered. For CFD work, this refers to the amount of teraflops used to process a model. There are also limits to the number of runs (80) and amount of time (60 hours) the windtunnel can be used in a week. Teams are only permitted to use a single windtunnel model.

This represents the biggest cut in terms of costly development work since the resource-restriction agreement was first introduced and should provide greater efficiencies in the way teams run their windtunnel/CFD projects.

New tyre confuses USC balancing act

Series bosses are yet to get Daytona Prototypes and LMP2 cars on an even footing ahead of the Daytona 24 Hours. By **JONATHAN INGRAM**



Spirit of Daytona's DP heads OAK's LMP2 car

24

The revisions designed to speed up Daytona Prototypes have had an adverse affect on attempts to create a level playing field with LMP2 machinery in the new United SportsCar Championship ahead of this month's

Daytona 24 Hours enduro.

A revised tyre introduced to prevent the blowouts that affected the upgraded DPs in testing at Daytona in November has taken the edge off the performance of the P2s and left them struggling to keep up.

USC sanctioning body IMSA and tyre company Continental have reacted to the two aerial accidents

that forced an early end to Prototype class testing two months ago. IMSA decided to remove the diffusers and introduced LMP-style wheelarch openings to reduce aerodynamic loads,

while Hoosier, which manufactures the Continental-badged rubber, has re-engineered the spec tyres on which the DPs and P2s run with stiffer sidewalls and a harder compound.

There were no failures during last weekend's official test at Daytona, nor in two private tests at the track in the run-up to Christmas, but the revised tyre has caused a problem for the P2s.

DP V LMP2 COMPARISON FROM DAYTONA TEST

DAY 1

DP Christian Fittipaldi	Action Express Coyote-Chevrolet	1m38.630s
P2 Dalziel/Sharp/Brabham	ESM HPD ARX-03b	1m40.006s

DAY 2

DP Jamie McMurray	Ganassi Riley-Ford	1m38.980s
P2 Ryan Dalziel	ESM HPD ARX-03b	1m40.078s

DAY 3

DP Richard Westbrook	Spirit of Daytona Coyote-Chevrolet	1m39.748s
P2 Dalziel/Sharp/Brabham	ESM HPD ARX-03b	1m39.908s





Elkins (l) is in charge of balancing

ELKINS: "In terms of how we balance them we may have to make an adjustment to the DPs to make sure they line up"

The lighter P2 cars had trouble getting heat into these tyres in cool conditions, a major problem considering half the race is run at night.

The theory was that the lighter and more nimble LMP2 cars would be faster in the infield section of the 3.81-mile Daytona International Speedway and make up – to a greater or lesser extent – the advantage of the more powerful but heavier DPs on the banking.

But problems bringing the tyres up to temperature – even on the warmer days of Saturday and Sunday – on the LMP2 machines meant the fastest of the lighter cars, the Extreme Speed Motorsports team's pair of HPD ARX-03b contenders, trailed the majority of the DPs through the test. Its lead entry was generally a second off the lap times of the fastest DPs in each session.

That was despite the P2s running at their regular weight of 900kg after they proved significantly slower than the DPs running at 960kg at Sebring and the truncated Daytona tests two months ago.

"I went two and a half stints on one set of tyres," said ESM's David Brabham. "The lap times didn't drop off very much and there was hardly any wear."

Brabham and team-mate Ryan Dalziel, who share the lead car with team co-owner Scott Sharp, acknowledged some gains in the lone night practice on Saturday with front-end aero changes, which put their HPD within 0.685 seconds of the quickest DP.

The performance of the LMP2 cars surprised Scot Elkins, the former American Le Mans Series technical official now overseeing the Balance of Performance for the combined series. He pointed out that despite the upgrades to the front splitter and new ground-effects tunnels that have added 400 pounds (180kg) of downforce on the DPs, the P2 cars still have the higher downforce levels.

"There's 800 pounds downforce difference between the P2 car and the DP," explained Elkins. "So a P2 car should be better through the infield. There's more downforce and it's lighter."

The aerodynamic configuration of the DPs is fixed after a final trip to the windtunnel, as is that of the P2s, which must run homologated low-downforce Le Mans aero. That means that engine air restrictors and weight remain the tools Elkins can employ ahead of the 24 Hours on January 24-25. Entering the balancing process, the DPs had 600bhp and the P2s a Le Mans-spec 450bhp. The DPs ran at 1036kg – the minimum is actually 2285lb because the DP rules are written in imperial measures. In other words, that is more than 100kg above the P2s.

Elkins isn't ruling out changes: "In terms of how we balance them we may have to make an adjustment on the DPs to make sure they line up correctly."

CALENDAR TO PLAY ITS PART

The outcome of this year's United SportsCar Championship will be determined by how well the horses run on each of the different courses.

The season begins with two of the most prestigious events at Daytona and Sebring, which perfectly illustrate the challenge. While Daytona favours the DPs, Sebring is a high-downforce track, which should potentially benefit the LMP2 cars over the course of the 12 Hours.

"To say anything now would be premature," said Chip Ganassi, whose Riley-Ford DP was one of the six DPs that dominated the top of the time charts during the three-day official test at Daytona. "At certain tracks, it looks like one car will have an advantage. I think they're going to have to tweak it from time to time and let's hope the people are open to that."

Johannes van Overbeek, who shares the second ESM HPD with Simon Pagenaud and Ed Brown,

said: "Right now, judging by the lap times, Daytona is the DPs' race to lose. But all tracks are not Daytona."

Gary Nelson, who directs the Action Express team's two Corvette-bodied Coyote-Chevrolet DPs, which were in the top three on the time sheets throughout the Daytona test, said he is reconciled to the unpredictable nature of the process.

"There's so many unknowns," he added. "My crystal ball is a little fuzzy. Whatever they give us, we'll work with that. We'll work hard at the things we can control."

Bill Riley, whose company manufactures the Riley DPs, thinks the first two races are the key to balanced performance.

"If you get Daytona and Sebring right, that should give you a good spectrum for most of the rest of the tracks," he explained. "Watkins Glen and Indy are the two in-between tracks in terms of both high speed and high downforce."



Sebring could be LMP2 territory



Tyres are too hard for LMP2s



Macau win plays part in Lynn's Red Bull deal

26

F3 heroics against one of Red Bull's top young guns helped young Briton Alex Lynn land a place on its scheme for 2014, and into a GP3 seat with Carlin. By **MARCUS SIMMONS**

New Red Bull junior recruit Alex Lynn believes that his Macau Formula 3 Grand Prix victory was a catalyst in winning his place on the scheme.

Lynn's Macau win, with Prema Powerteam, prevented Carlin-run Red Bull junior Antonio Felix da Costa from making it two on the trot in the Far East classic.

As a result of joining Red Bull, the 20-year-old Briton will switch to the GP3 Series, which he will contest with Carlin.

"It came around really quickly," said Lynn. "Dr Helmut Marko [Red Bull's motorsport advisor] called

me a few days after Macau and it all went from there. He said, 'When can you come and see me?' and I said, 'As soon as you want!'

"I was extremely excited. You know that if you do a good job and win big races like Macau, you stand a good chance of being recognised by the right people. It's pretty special."

Lynn was announced as part of a slimmed-down line-up of three Red Bull junior drivers in the build-up to Christmas.

The others are Carlos Sainz Jr, who remains on the scheme to compete in Formula Renault 3.5 with DAMS, and Formula Renault Eurocup champion Pierre Gasly, who will also contest FR3.5 with Arden Motorsport.

There appears to be no place for

F3 racer Tom Blomqvist (see right) or Formel Masters competitors Beitske Visser and Callan O'Keeffe.

CARLIN DELIGHT

Carlin team boss Trevor Carlin has said that his squad will "never get a better shot at winning the GP3 Series title" than with Lynn, and "will leave no stone unturned to do so".

The deal means Carlin has got a man it wanted for the 2012 British F3 campaign. Lynn eventually graduated to F3 with Fortec Motorsport, the team with which he had won the 2011 Formula Renault UK title.

"We've always wanted to run Alex," said Carlin, "but there was such a hoo-hah about us running too many cars in British F3 for

2012 that it wasn't feasible. We've stayed in touch and realise what a great talent he is.

"We're very excited about having him in the team, especially after Macau – he won it fair and square, hands down."

STEP INTO THE UNKNOWN

Drivers making the switch from F3 to GP3 traditionally take half a season to hit their stride, thanks in part to the limited testing available. But Lynn is renowned for being a smooth driver and very light on his tyres – potentially ideal characteristics for a category where it is vital to manage the Pirelli rubber.

"I think GP3 is a good option and I feel I'm at the right stage in my



Red Bull's new recruit was a race winner in European F3



PREMA FAITH IN F1 JUNIORS

Alex Lynn's departure for GP3 means that, for the first time since 2009, Prema Powerteam will go into a European F3 season without an established race-winning driver in its line-up.

The Mercedes-powered team is set to run Formula Renault ALPS champion Antonio Fuoco and FRenault Eurocup ace Esteban Ocon, who are proteges of the Ferrari and Lotus F1 teams respectively, along with Nicholas Latifi (switching from Carlin) and Dennis van de Laar (from Van Amersfoort Racing). At present, van de Laar is the only one of the quartet to be officially confirmed.

Prema team manager Rene Rosin said: "Professionally I would have preferred Alex to stay in F3 as a guaranteed title contender, but personally I'm really happy for him and wish him the best.

"I am not pessimistic – we have two very good rookies and we can expect surprises from all our drivers."

BLOMQVIST IN CARLIN FRAME

Despite losing his Red Bull support (see main story), Tom Blomqvist (below) looks to be closing on a berth in Carlin's F3 European Championship squad.

Anglo-Swede Blomqvist, who has two seasons in European F3 under his belt, ran with Carlin in the pre-Christmas Valencia test as part of the Sean GP stable that includes Sean Gelael and Antonio Giovinazzi, who contested their rookie F3 seasons last year with Double R Racing. The trio is believed to be closing on a joint deal to race with Carlin's Volkswagen-powered squad in 2014.

Carlin this week is set to confirm European F3 Open champion Ed Jones, and is expected to continue with reigning British F3 champ Jordan King.

XPB/LAT



career to be moving on," he said. "If you look at my F3 CV from 2013 – first in Macau, second in the Masters, third in the championship – it's pretty good.

"I'm looking forward to the GP3 challenge. I'm quite a smooth driver so hopefully I should be kind to the tyres, but I'm yet to drive on them so I'm not sure what to expect. And Carlin are a really good team that I've been trying to beat for the past couple of years."

There are only six pre-season test days for GP3, beginning at Estoril on March 27/28, but the Carlin team could give Lynn test mileage beforehand in obsolete Formula Renault 3.5 and F3 machinery, and views him as a driver who can also help with its other programmes.

"He's a very talented Red Bull junior," said Carlin, "so we want to take advantage of the fact that he is there for us – I want to use him and abuse him!"

Lynn added: "The team are putting together the biggest programme they can to help me develop."

Whether such a programme could include extra races in F3, such as Daniil Kvyat added as a Red Bull junior in 2013, is unclear.

"I'm quite happy with what I've done in F3," said Lynn.

"But if an opportunity arises that could benefit me in GP3 by doing something in F3, we may look at it."

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TOP 25 big moves of 2014

This year's major international championships will have some very familiar faces in all-new places. Editor **CHARLES BRADLEY** gives his guide to the top 25 movers and shakers of 2014

The Iceman is back in scarlet



DUNBAR/LAT

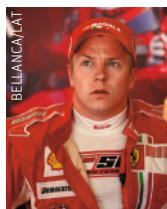
Kimi Raikkonen to Ferrari

FORMULA 1

2007 world champion returns to partner Alonso

After four years away (but only three off the payroll) Ferrari's last world champion returns to the Scuderia to partner its tainted goldenballs, Fernando Alonso.

Kimi's race-winning form with Lotus during the past two years, coupled with a real fear that Alonso was about to do the unthinkable and walk out on his long-term contract to go to McLaren, led to this unlikely renewal of wedding vows. Even more far-fetched, president Luca di Montezemolo – the man who



BELLANCA/LAT

sanctioned Kimi's pay-off, which was spent on rallying – acquiesced to the Finn's recall. A rare U-turn.

Since his return to F1, Raikkonen has appeared a different animal to the one who wowed with Sauber, McLaren and Ferrari first time around – no longer Mr Maximum Attack, more Mr Consistency. He should pose a much far more abrasive (albeit apolitical) team-mate than Alonso had in Felipe Massa, and it also marks an end to the clear number one/two demarcation. Team orders and Kimi are not happy bedfellows...

For Kimi fans, it's a dream. For Alonso, he's a threat who'll need swatting. For Raikkonen... who knows? **STEFANO DOMENICALI SAYS** "For anyone thinking that the choice of Kimi is somehow an anti-Alonso choice, I can put their minds at rest."

Pastor Maldonado to Lotus

FORMULA 1

F1 bad boy joins reformed character Grosjean

Venezuela's only grand prix winner has been tarred with many brushes, including 'pay driver' and 'rock ape'.

However, that simplistic view is to ignore someone who's won a race in a Williams, under intense pressure



DUNBAR/LAT

from Fernando Alonso in his home grand prix.

Like writing off Romain Grosjean as a 'first-lap nutcase', there's more to Maldonado than meets the eye. There should be no excuses about the machinery beneath him, and if his moments of over-enthusiasm can be kept in check, it's a very potent line-up. But that's a big 'if'.

HE SAYS: "It is a fantastic opportunity. I just need to have a good car, good support from the team and try to improve myself in every way."

Daniel Ricciardo to Red Bull

FORMULA 1

Toro Rosso graduate accepts biggest challenge in F1

Red Bull's decision to promote from within its junior team ranks, rather than hire a proven 'outsider' like Kimi Raikkonen, should ensure continued harmony as it bids for a fifth straight world title with Sebastian Vettel. Ricciardo's first task will be to support its constructors' championship bid; his second will be to match the recent form of outgoing incumbent Mark Webber (third, third, sixth and third in the past four seasons) in the car.

The ultimate test for Ricciardo, of course, is how he compares against Vettel. The new regulations will give him a great opportunity as the established frontrunners bed-in to their new machinery, and his 'headmaster', Dr Helmut Marko, has set a target of challenging Vettel by "mid-season at the latest".

Depending on circumstances, he must be aiming for a 180ish-point season to retain his place, with Red Bull's conveyor belt of talent bringing in talented Russian Daniil Kvyat alongside Jean-Eric Vergne at Toro Rosso next year. His dream move made, now his goal must be to retain his seat – and getting close to Vettel. **HE SAYS:** "Hopefully Sebastian's not as dominant with this new rules package as he has been. I will do everything I can to get up to his level."



FERRARO/LAT

Felipe Massa to Williams

FORMULA 1

Ferrari stalwart joins sleeping giants

After eight years at Ferrari, this move will come as a huge culture shock. Like Rubens Barrichello before him, Massa has the opportunity to extend his

F1 career – and should the Mercedes engine be the benchmark, as many expect, he could certainly add to his massive career points-haul (eighth on the all-time list). But he'll find last year's star rookie Valtteri Bottas a tough team-mate.

HE SAYS: "So many things are changing inside the team that it maybe can be interesting and important for the future, not just next year."



DUNBAR/LAT

Nico Hulkenberg & Sergio Perez to Force India

FORMULA 1
Stoppag moves or Mercedes-powered masterstroke?

Dream drives turned to nightmares for both of these drivers.

Hulkenberg's hoped-for move to Lotus didn't materialise due to money issues; Perez's tenure of a McLaren seat lasted for just one (apparently) not-good-enough season.

In terms of ports in a storm, Force India provides each with the chance to showcase their undoubted talents again. Perhaps the most telling stat, however, will be how they fare against each other.

HULKENBERG SAYS: "I'm happy coming back here, and I can see [the team] is moving forwards."

PEREZ SAYS: "If I didn't get this drive it would have been difficult to stay in F1."

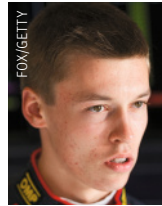


Daniil Kvyat to Toro Rosso

FORMULA 1
GP3 champion gets chance to show he's Vettel Mk2

The way he stormed to last year's GP3 title in the second half of the season proves he's capable of great things, but he'll still be a teenager when his F1 career starts.

It's potential that Red Bull is attempting to mine by placing him at Toro Rosso. There should be little pressure on his shoulders, and a fine yardstick is provided by team-mate Vergne.



"This is a dream come true and a priceless opportunity"

Frederic Makowiecki to Porsche's GT squad

SPORTSCARS
Surprise move from Aston for 'best-in-class' driver

This was a surprise move, not least as 'Fred Mako' (as he's more easily referred to!) held factory contracts with two manufacturers – Aston Martin and Honda – last year.

The Frenchman won races in the World Endurance Championship, Blancpain Endurance Series and Super GT series in Japan – and his Blancpain pole at Silverstone was arguably the GT lap of the year.

The 33-year-old joins Porsche's nine-man roster of works GT drivers (Timo Bernhard, Romain Dumas and Marc Lieb were recruited for its new 919 hybrid LMP1 project), and he'll concentrate on the WEC as Porsche goes head-to-head with Aston, Ferrari et al.

HE SAYS: "Porsche is special for me because it is where I started my sportscar career."



Kevin Magnussen to McLaren

FORMULA 1
Make-or-break chance for F1 Renault 3.5 champion

One of the big questions of 2014 must be: is Magnussen the next Lewis Hamilton or the next Heikki Kovalainen?

Judging by his junior-category form, he is well prepared for McLaren's second seat, but is he ready for a drive with such a top team – especially after what happened to Perez?

His father Jan had huge talent, but couldn't apply himself at the highest level. Kevin appears to have a wiser head on his young shoulders, and must grasp this opportunity.

HE SAYS: "The fact that Lewis was so successful doesn't raise the pressure for me, it just shows that it can be done."



Mark Webber to Porsche's new LMP1 programme

SPORTSCARS
Le Mans return for Formula 1 stalwart

After his dozen years in Formula 1, the nine-time grand prix winner returns to sportscars for the first time since his Mercedes GT days.

Those are best (or worst) remembered for his Le Mans somersaults in 1999, but don't forget he's a five-time winner in FIA GTs, sharing his Merc with Bernd Schneider, so he's no stranger to regular long-distance racing in front-of-the-field machinery.



Porsche's return to top-flight prototypes is also one of the big stories of 2014, so it will be fascinating to see what this combination can do against the established might of Audi, with its flyers like Andre Lotterer and Loic Duval, and Toyota's third-year campaign with drivers of the calibre of Anthony Davidson and Sebastien Buemi.

Le Mans will be the programme's centrepiece, as Porsche returns as a factory contender for overall honours for the first time since it last won there in 1998. Its LMP1 project is all-new, headed by former BMW F1 chief Fritz Enzinger. Whether Webber is up to the task isn't in question here; it's how quickly Porsche's 919 hybrid can catch up with its proven rivals.

Adrian Sutil to Sauber

FORMULA 1
Can he match Hulkenberg's sterling efforts?

Odd that a team associated with Chelsea, who once bought Fernando Torres for £50million, could not afford to cling on to (or perhaps didn't want) its pushy F1-winner-in-waiting Hulkenberg.

Instead, in true Swiss style, it has opted for the sensible option of a proven quantity in Sutil. He brings over 100 GP starts alongside second-year driver Esteban Gutierrez, and will be key if Sauber is to repeat its seventh position in last year's constructors' points.

HE SAYS: "It's now time to embark on a new challenge. I am determined to do my part in order to have a successful future together."



How will Porsche 919 stack up against Audi?

"I'm looking forward to this new challenge. Porsche will undoubtedly set very high goals"

Montoya in testing action at Sebring



Juan Pablo Montoya to Penske

INDYCAR

CART champion, Indy 500 & F1 winner moves on from NASCAR

It seems a long time ago that he was challenging for regular race wins in Formula 1 – and that's because it is. Since he jumped ship mid-2006 in an angry flap to NASCAR with old mate Chip Ganassi, he's been trying (mainly unsuccessfully) to crack US stockcar's code. He never did take victory on an oval, although he won races around both of its road courses, racking up 24 top-fives and 59 top-10s



in total over seven years out of single-seaters.

With Ganassi running out of patience with him, his IndyCar rivals Penske have swooped (beating Andretti Autosport) to bring him back to a series that he starred in during its Champ Car guise. He won one-quarter of all the races between 1999-2000 – a staggering hit-rate – leading over half of them (1774 laps!) and, of course, the Indy 500 at his first (and only) attempt.

After struggling with Ganassi's mid-grid stockcar team, Montoya reasons that he wanted to drive a race-winning car again. Roger Penske will give him that, so will Chip live to rue letting him leave – especially now that Dario Franchitti has been forced to retire?

Tony Kanaan & Ryan Briscoe to Ganassi

INDYCAR

Indy 500 winner replaces retiring Franchitti; second chance for Aussie

Last year's Indy winner Kanaan had already done his deal to switch to Chip Ganassi's crack IndyCar squad before the accident that forced Dario Franchitti's retirement from the sport. Subsequently, the decision was made for him to drive Franchitti's famed #10 Target car, allowing Briscoe the opportunity to return to the team that gave him his first shot in 2005.

KANAAN SAYS: "I want to be in the best team with the best guys who have been beating me."

BRISCOE SAYS: "It's not every day you get to be a part of a team like this."



Mikko Hirvonen & Elfyn Evans to M-Sport

WORLD RALLYING

One restoring his reputation, one seeking to make his

The Citroen reject (Hirvonen) and rising Welsh star (Evans) both have points to prove, but for polar opposite reasons.

Proven title contender Hirvonen didn't shine as expected with Citroen, and is seeking to re-establish his career with a quality team he has starred with before; Evans takes the next step as M-Sport attempts to craft a homegrown star of the future.

HIRVONEN SAYS: "Joining M-Sport will give us a good chance to try again – a fresh start."

EVANS SAYS: "We have a long-term plan to get to where we all, ultimately, want to be."



Thierry Neuville to Hyundai

WORLD RALLYING

Last year's runner-up leads South Korean charge

Hyundai's return to the WRC arena, following its somewhat acrimonious exit in 2003, is headlined in its intent by signing last year's world championship runner-up. Neuville is under no illusions about the task ahead of him, hence his long-term, three-year deal to develop the i20.

HE SAYS: "It is the perfect fit because it is a young, emerging and ambitious manufacturer team with long-term objectives."



Kris Meeke to Citroen

WORLD RALLYING

Despite the crashes, Briton gets Loeb's prized seat

After a number of false dawns (his last with Mini in 2011) in a rollercoaster career, Colin McRae's protege finally gets his major break in a full-time works car with a committed manufacturer.

What's more, he effectively replaces the legendary Sebastien Loeb in its line-up: no pressure there! If he can resist the temptation to drive flat-out, and keep it on four wheels, he could finally deliver on all that promise as Britain's next WRC title hope.

HE SAYS: "I'm not coming in to try to emulate Loeb – nobody could ever do that."



Robert Kubica to M-Sport

WORLD RALLYING

Ex-F1 star gets full-time Fiesta WRC opportunity

The injuries sustained in a crash in an Italian rally in 2011 have precluded a return to F1, so the Pole is pressing on with his rallying career. Having sealed the WRC2 title last year with Citroen, he has transferred to Malcolm Wilson's M-Sport team for his first attempt at the full WRC series.

The decision of his co-driver Maciek Baran to walk away from their partnership blunted his hopes of starring in a works Citroen on last year's Rally GB, during which he crashed twice. His speed is not in any doubt, but the accidents that have blighted his rally career must be stopped if he's to progress to be a WRC title challenger.

"M-Sport will create a solid foundation for my development and I'm looking forward to gathering valuable experience on the WRC stages"



Jack Harvey to Sam Schmidt

INDY LIGHTS

Rising British star seeks his fortune in the States

Fifth in his rookie season in GP3 wasn't quite enough to convince his backers, Racing Steps Foundation, to spend more millions on the F1 feeder series. So sights have been switched to the American open-wheel scene where Harvey will race for one of IndyCar's top junior teams. **HE SAYS:** "We always try to associate ourselves with winners, which is exactly what this team has proven itself to be."



STALEY/LAT

Carlos Sainz Jr to DAMS

FORMULA RENAULT 3.5

Red Bull protege replaces Magnussen

The son of a world rally legend moves to the team that took Kevin Magnussen to last year's title, allowing him to graduate to F1. After a mixed bag in his dual GP3/FR3.5 campaigns, Sainz will hope the French team offers him the stability he craves for a full-on title tilt to earn his continued place in the Red Bull junior ranks. **HE SAYS:** "Since the first test I did with DAMS last year I have always wanted to be part of this team."



ROZENDAAAL/LAT

Jolyon Palmer to DAMS

GP2

Multiple race winner seeks title tilt with former champs

For his fourth year in GP2, this is a no-excuses move to the team that took Romain Grosjean and Davide Valsecchi to the title. Palmer has three GP2 victories to his name, and two of those came last year in feature races with Carlin. DAMS only finished fourth in last year's teams' points; will Palmer blend into its French atmosphere? **HE SAYS:** "I only have one objective for next year, which is to win the GP2 title."



STALEY/LAT

Sebastien Loeb & Yvan Muller to Citroen

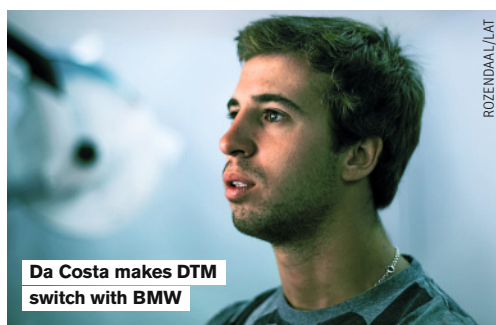
WORLD TOURING CARS

WRC legend joins four-time champ for Citroen title bid

After a year of racing his McLaren in FIA GTs, WRC gigastar Loeb makes his tin-top bow as part of Citroen's new attack. In team-mate Muller, he has the ultimate benchmark of performance. After the way his last French team-mate relationship ended (remember Ogier?) there could be fireworks! **LOEB SAYS:** "I don't expect to win straight away, but I am determined to get there one day." **MULLER SAYS:** "We have set ambitious goals for our new challenge in WTCC."



MCKLEIN/LAT



ROZENDAAAL/LAT

Da Costa makes DTM switch with BMW

Antonio Felix da Costa & Maxime Martin to BMW

DTM

Red Bull junior & GT racing star switch codes

Overlooked by Toro Rosso in favour of Daniil Kvyat, da Costa can busy himself in the hotbed of DTM competition, leaving him free for F1 simulator work for Red Bull Racing on GP weekends, too. Martin comes from a very different background: last year commuting between the ALMS and Blancpain Endurance Series for BMW as well as testing its DTM car. Highly rated in GT circles, how he adapts to tin-top sprints will be fascinating. **DA COSTA SAYS:** "DTM will open new things for me to learn, so as a driver I can develop." **MARTIN SAYS:** "It was always my goal to use my year as test and development driver to put forward my case for a DTM seat."



BOVD/LAT

Kevin Harvick & Kurt Busch to Stewart/Haas

NASCAR

Two more aces join Tony Stewart's all-star line-up

Harvick has been a nearly-man of NASCAR, often knocking on the door of the championship but never being invited over the threshold. His move from RCR with Budweiser backing, gives team boss Stewart a top-flight wingman. In Busch's case, this former champion brings his bad-boy persona to the party. More likely to butt heads than bring harmony to the outfit, there's no doubting his speed or ability to win races in top-notch equipment. **STEWART SAYS:** "Everybody is looking at this as 'oh my God, this is an atomic bomb that can get set off at any moment'. But I really think it's an asset for Kurt to have both myself and Kevin as a support system, and to lean on each other."



THACKER/LAT



NASCAR MEDIA/GETTY

Busch will drive the #41 machine

Marc Hynes to Triple Eight MG

BRITISH TOURING CARS

The man who beat Button in F3 makes racing return

Triple Eight is no stranger to running satellite cars alongside its main operation, so if Hynes can get rid of the rust after a five-year sabbatical from racing expect him to be there or thereabouts with the likes of Jason Plato, but he'll need to learn how to get his elbows out. **HE SAYS:** "I want to win the BTCC, but I don't know how long it might take."



HAWKINS

Rob Huff to Lada

WORLD TOURING CARS

Russians get serious with swoop for ex-world champ

The 2012 WTCC champion is back in a works car, but not quite the one we might have expected. While Citroen will be grabbing the headlines with its Muller/Loeb axis, Huff has two years to turn Lada's machine into a world beater for the new generation of regulations. **HE SAYS:** "I've been working hard all year to get back in a manufacturer seat, so I'm very happy."



Chaz Mostert to FPR

V8 SUPERCARS

Youngster replaces Davison at Bathurst-winning team

Talents don't come more precocious than this: the 21-year-old stepped up from the Development Series to replace Jonny Reid at the struggling Dick Johnson Racing team after three events this season and took a shock win at Queensland Raceway. **HE SAYS:** "To be able to call myself an official Ford factory driver is truly a dream come true."



THORNE/GETTY



Kimi's extracurricular activities

Kimi Raikkonen has always been his own man, so it made sense for him to try a few different things during his time away from F1. **AUTOSPORT** looks at the Finn's exploits outside his usual environment

KIMI IN RALLYING

The Iceman became the Snowman pretty quickly. Shortly after starting his very first event with the Citroen C4 WRC in 2010 – the Arctic Rally in Finland, a warm-up for Rally Sweden – spectators were treated to the surreal sight of the '07 Formula 1 world champion digging his own car out of a snowbank.

That would never have happened at Ferrari. But it was a skill that Raikkonen was to practise again on Rally Sweden itself a couple of weeks later, where the icy stages also take no prisoners. The man who Sir Stirling Moss once described as “the fastest driver in the world” turned out to be a dab hand with a shovel as well.

Of course, this was far from being Raikkonen’s first foray into world rallying – that took place on his home Rally Finland in 2009, at the wheel of a Super 2000 Abarth Grande Punto. He was straight into the top three, fighting with future Intercontinental Rally Challenge and Super 2000 champion Juho Hanninen and Anton Alen, a former 1000 Lakes Group N class winner and son of rally legend Markku. Kimi is very close to the Alen family – one of his houses in Finland is just across the road from Markku’s – so he probably picked up a few tips.

Raikkonen undoubtedly felt his stunning performance in Finland would translate seamlessly into something similar in the World Rally Car category. Plenty of others thought exactly the same. But being competitive in the Super 2000 class is one thing, taking on

Sebastian Loeb in the same car is another.

To be fair to Raikkonen, he approached it with an open mind. “I’ve always admired rally drivers for their skills and bravery,” he said at the time. “I just wanted to see if I could do it myself.”

It only took him three WRC events to finish in the points (with eighth in Jordan), and on the following round he scored what would remain his best result: fifth in Turkey. That event, as Europe lay beneath an ash cloud that grounded aviation, was the prelude to an interesting journey home for most people. Apart from Kimi that is, who somehow managed to persuade his pilot to take off. He was relaxing at home before most of his Citroen colleagues had thought about boarding their coach back to Paris. It took them three days.

“Every Citroen driver bar one would sit on the bus as Lindstrom frantically called Kimi’s room from reception”

There were some low points as well. Raikkonen let out an unmanly yelp as his car went off the edge in El Cubilete, Mexico, followed by a string of words that are unprintable but extremely amusing.

While Kimi’s co-driver Kaj Lindstrom no doubt got sick of a scene acted out at hotels around the world most mornings – every Citroen driver (bar

one) sitting patiently in the minibus, waiting to leave, while Lindstrom frantically called Kimi’s room from reception – Loeb was quite chuffed. “It’s good, because normally it’s me who is late,” he pointed out – directly from the minibus.

Kimi’s first and only fastest stage time came on the 2010 Rally Germany’s Circus Maximus, a spectator superspecial around the Porta Nigra – an ancient Roman gate – in Trier.

For his second season in the WRC, Raikkonen’s budget was significantly reduced, forcing him to go with his own team – Ice1 Racing – in a Citroen DS3 WRC funded by a variety of private sponsors. He didn’t complete a full season, tackling nine events in total with a best result of sixth in Jordan and Germany.

Under the WRC Team rules, he was obliged to contest two events outside Europe, and his decision to skip Rally Australia because it was “a long way” fell foul of that regulation. Unsurprisingly, the Australian stewards did not accept the geographical location of their event as a mitigating circumstance and Ice1 Racing was excluded from the teams’ championship (although Raikkonen finished 10th in the drivers’ standings, for the second year running).

Then came the call to Lotus, but Kimi doesn’t think he would be where he is today without his two years in rallying. “You cannot compare the two and say that this definitely helped,” he points out. “But when I stopped in F1 I was ready to do something different and challenge myself, and without that I don’t think I’d have come back.”

Raikkonen might not have had the results he wanted in the WRC, but he brought some real star quality to the championship with an army of passionate fans. To our knowledge, Ken Block is the only other rally driver who has been followed into the toilet and photographed there... ▶

David Evans

Raikkonen’s first World Rally event in a WRC car – before he dropped it into a snowbank





Raikkonen made NASCAR debut in truck (below) before Nationwide outing

KINRADE/LAT

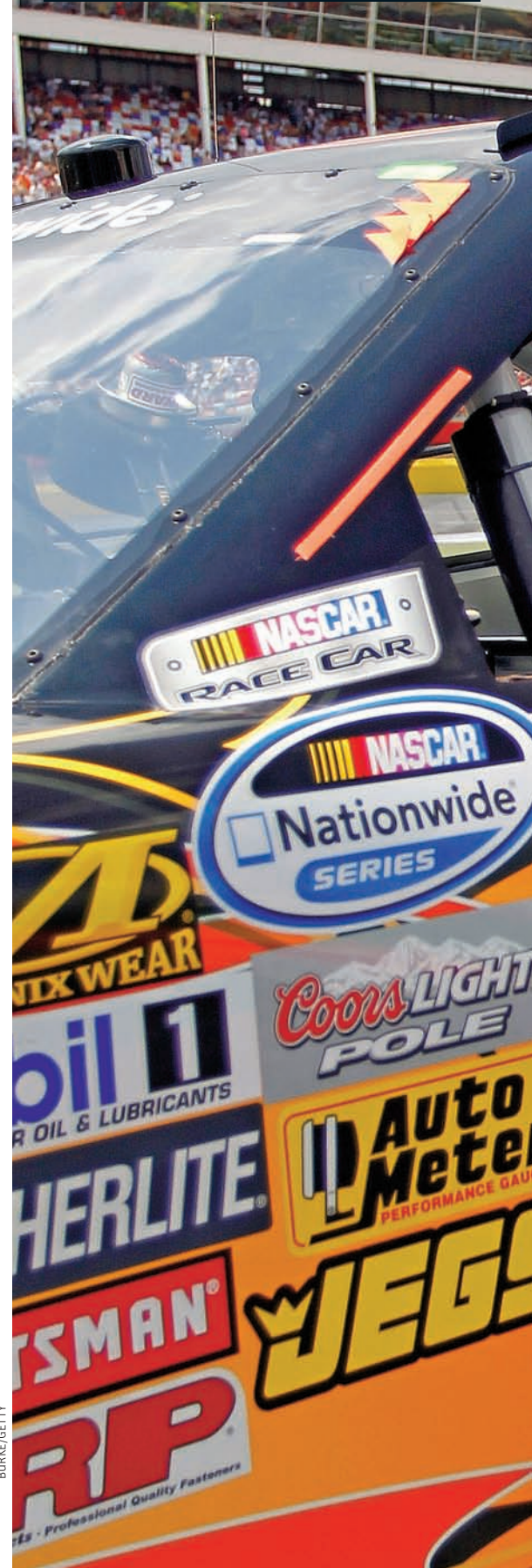


KINRADE/LAT



LECKA/GETTY

“He comes on the radio and says, ‘My feet are getting very hot. Never mind, I’ll put them out the window!’” RICK REN



BURKE/GETTY

KIMI IN NASCAR

With his rallying sojourn fraying at the seams, Raikkonen spent a month in the US in 2011, running two tests and two races with Kyle Busch Motorsports.

His first experience of NASCAR-style machinery came in a truck test at the half-mile Gresham Motorsports Park oval in Georgia. And it didn't take long for Kimi to make an impression on the team.

“A lot of time when we test, the driver will go out and mosey around for a couple of laps to get their bearings and get familiar with the racetrack,” says KBM team manager Rick Ren. “He didn't do that. When he went down pitroad he was wide open and that just shows his ability and confidence in his car control. I'm not used to people doing that.”

A further test followed at Rockingham, before Raikkonen made his Truck Series debut around the 1.5-mile Charlotte Motor Speedway. Kimi finished 15th and a week later contested the Nationwide race at the same track in a car run by KBM, but entered by Joe Nemechek's team.

“The truck race didn't go as good as I hoped it would, but the car race was going very well until he had a pitroad speeding penalty,” Ren recalls. “I

was really impressed during the Nationwide race. Our car was not nearly as good as what it could have been, he was driving the wheels off that thing and doing a very good job. It just ended up being not quite such a good day. We were running about seventh and that's very respectable.”

But the race wasn't without its dramas. As anyone who heard Kimi's Abu Dhabi radio chat is aware, he knows what he's doing — even if that means failing to wear the correct protective gear...

“When he first came here I looked at his shoes and I told him, ‘I don't think you'll be able to run those shoes over here’ and he's like, ‘Yeah, yeah, yeah that's what I always race with,’ so he didn't want to put the heat shields on. The floorboards get exceptionally hot in NASCAR vehicles, maybe 125-130 degrees.

“But he didn't want to put his booties on as we call them and we are a bit into the race and he comes on the radio and says, ‘My feet are getting very hot! Never mind, I will put them out the window!’ I thought that was the funniest thing I ever heard on the pitbox. And that was the only time he brought it up in the whole race.”

The team was keen to run Raikkonen in more races, but he never returned its call.

Andrew van de Burgt



What might Raikkonen have achieved had he raced the Peugeot 908?

Raikkonen slides into Busch/Nemecek Toyota – with insufficient footwear protection...

KIMI IN SPORTSCARS

Peugeot motorsport boss Olivier Quesnel had long since promised Kimi Raikkonen, then competing in World Rallying with sister marque Citroen, a go in one of his 908 HDi LMP1 turbodiesels and duly delivered in August 2011.

Quesnel, who was in charge of both marques, always denied that there was anything more to the test, but insiders insist that an outing at the Le Mans 24 Hours was discussed at some point. And quite rightly so after Raikkonen's performance during his short try-out at Motorland Aragon.

"Kimi was quick straight out of the box," says one of Peugeot's retinue of drivers. "He got in the car and matched the quickest time of the test inside four laps.

"He arrived late, I think, didn't make any fuss and didn't bother too much about the seating position, and bang, he did the time. He did around 25 laps and then went home."

Raikkonen apparently liked the car, apart from its powersteering, but any chance of a race outing as good as disappeared three months later when it was announced he'd be returning to F1 with Lotus. And then it disappeared for good when Peugeot called time on its sportscar programme another couple of months after that. ❄️

Gary Watkins

How McNish became a sportscar great

Last month, Allan McNish called time on a superb career. **GARY WATKINS** looks back at what made him special by focusing on perhaps the Scot's best drive

36



DOLE/LAT

Sears Point 2000. Some say it was Allan McNish's greatest drive, and the man himself leans in that direction. It's also arguably the most important of the 29 wins he notched up with Audi before calling time on his illustrious career last month. Domination in California set him on course for the American Le Mans Series title, secured his place in the hearts and minds of the Audi Sport hierarchy and belatedly persuaded the US sportscar fraternity that he was something special.

What happened that weekend illustrates exactly why McNish can rightly claim to be one of the all-time sportscar greats. The attributes that he would use over a career that took him to three victories in the Le Mans 24 Hours, a trio ALMS titles and, last year, an FIA world title in the World Endurance Championship were on show that weekend in Sonoma. It was almost as if, reckons Audi Sport Team Joest technical director Ralf Juttner, "he'd printed a catalogue and gone through it page by page to show everyone how good he was."

McNish was mighty that weekend on the way to a first ALMS victory, notched up with long-time

partner Rinaldo 'Dindo' Capello. They didn't just win, they blew everyone else into the weeds. And everyone else included Audi team-mates Emanuele Pirro and Frank Biela – McNish famously lapped the Italian in a stint and a half.

The closest Audi came to losing at Sears occurred as McNish put his team-mate a lap down. The two R8s very nearly collided, not because Pirro was being obstructive, but because he was taken by surprise by his team-mate. The Italian wasn't looking in his mirrors and why should he have been? "I drive an Audi," he said at the time, and he wasn't going to be overtaken by anyone who wasn't driving one of the German ►

HIS EARLY YEARS IN SINGLE-SEATERS

Allan McNish's early career appeared to have an unstoppable momentum and, with the backing of Marlboro, "the message was, if you kept winning, you'd keep on moving up". He swept through Formula Vauxhall Lotus (winning the British title in 1988) and British Formula 3 (a near-miss in '89), and on into a successful first year of Formula 3000 with DAMS. The train was derailed over the course of two difficult F3000 campaigns, first with the French team again, and

then the British 3001 International squad.

"Everything was looking stunning: I had sailed through every category up to then," he says. "Then in 1991, DAMS didn't have the same structure as the year before and that year's Lola was a complete dog. The momentum went and I wasn't brilliant through to the end of the season."

McNish was hit by an illness, almost certainly some kind of virus, that remains a mystery to this day.

"I've never been 100 per cent sure what it was, but through the end of 1991 my joints started swelling up," he recalls. "I missed a few races the next year, and after the races I did, I was fucked; I had to be lifted out of the car at Barcelona."

"When your star is rising and then your star doesn't shine for a couple of years for whatever reason, you are quickly forgotten about because the next star is coming along."



McNish was mega at Sears Point in 2000



Young McNish was on inexorable rise...



...which included '88 Vauxhall Lotus title

THAT FIRST STEP INTO SPORTSCARS

The move into sportscars for Allan McNish had been about "getting my bum into something" after an attempt to relaunch his single-seater career in Formula 3000 with Paul Stewart Racing in 1995 didn't yield the desired results and a try-out with the PacWest CART team at the end of that season

proved successful on the stopwatches but led nowhere.

"I thought sportscars were shitty old things with a lot of power driven at 90 per cent," he explains. "I wanted to test one, but in my heart I wasn't ready to say my single-seater career was over. It was a case of having to do something, because my only

race in 1996 was the Porsche Supercup race at the British Grand Prix."

McNish admits to not enjoying the Porsche 911 GT1 on first acquaintance, but he did enough in testing to land a gig as test driver or, as he puts it, "odd-job boy". One of those tasks was to bolster the privateer Rohr team's attack in the SPORTSCAR (nee IMSA) series. A first-time-out victory on the Las Vegas 'roval' proved to be pivotal in his sportscar career.

"That was the first race I had won in a wee while [actually since 1990]," he recalls. "It reminded me of why you go racing: do you do it to say you're a racing driver or do you do it to win? I realised I did it to win."



With Joest Audi tech director Ralf Juttner



First taste of sportscars: Silverstone Supercup '96

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Battling it out with Jarno Trulli's Renault in F1 Toyota in 2002



COATES/LAT

Happy times with Toyota for McNish

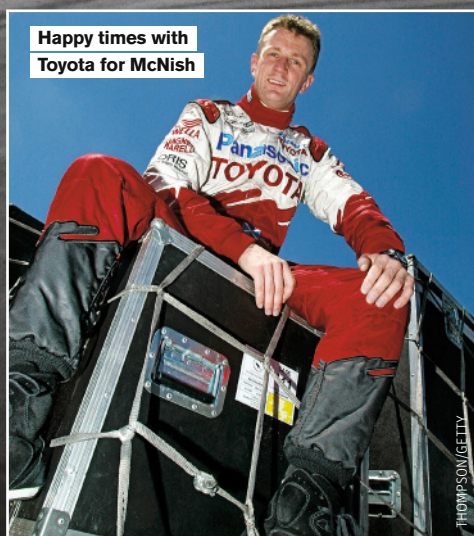


PHOTO: SPM/GETTY

FORMULA 1 CUL-DE-SAC AT TOYOTA

Allan McNish's big Formula 1 break came 10 years after he started testing with McLaren, a role he subsequently filled with Benetton – and it came as a result of his prowess in a sportscar. Under contract to Porsche, which was taking what was meant to be only a one-year break from top-flight sportscar racing, he was free to race for another manufacturer at Le Mans. That make was F1-bound Toyota,

whose boss Ove Andersson he suitably impressed.

"It was a big decision, but an easy decision," says McNish of turning his back on sportscars when the call from Toyota came in mid-2000. "We are talking about the largest car maker in the world. They were saying, 'We are doing F1 and we want you to be the first-ever Toyota F1 driver.'

"But I knew that if I gave it a run, there was always the

opportunity to come back to sportscars. Agreements have ceased through no fault of my own, but the phone always kept ringing."

McNish claims there is no bitterness that he was dropped after one season of racing in 2002.

"I was a bit pissed off at the time," he explains. "My contract was up for renewal but, when you look back on it, it was big boys' politics."

► twin-turbo prototypes, so could scarcely have imagined the sister car would be homing in.

"Emanuele got out of the car and said something like, 'I didn't see Allan spin,'" recalls Juttner. "He didn't realise that he had been lapped."

The oh-so-tight-and-twisty Sears Point Raceway, as it was then known, was the perfect stamping ground for McNish. The one skill that for many set him apart from his peers was his ability in traffic, the way he could scythe his way past slower cars. And that was crucial at Sears like nowhere else.

McNish sometimes appeared to have a sixth sense in the traffic during the cut-and-thrust of his three ALMS campaigns. Some interpreted it as aggression or even recklessness, but that would be wrong.

Juttner remembers complaints from within the ALMS GT ranks about McNish's driving. "Sascha Maassen [who was driving a Dick Barbour Racing Porsche] said to me, 'This guy is crazy; he must be careful or there will be a crash,'" explains Juttner. "He told me that when he saw Allan



Great partnership: Capello and McNish

behind him he was immediately very careful. I said, 'You know what Sascha, this is exactly what he is aiming for: he wants you to see him, know that he will make no compromises and for you to act accordingly! Allan never did have any accidents with slower cars in our open cars.'

"It was his ability in traffic that made him shine above others. It played a big role in his superiority on a small-and-twisty circuit that day at Sears."

McNish was bang on the pace on just about

every lap he did at Sears that year, from the start of practice to the final lap of his second stint. He had an uncanny ability to get straight on the pace on circuits he knew and those he didn't. That was to prove crucial in that first successful ALMS campaign. Team-mate Capello was in only his second year of sportscar racing and was new to all the tracks in North America, and McNish was able to afford him a greater proportion of the track time ahead of qualifying and the race.

"Allan knew that he couldn't win the race alone," explains Juttner. "He needed his partners to be on top form and up to speed as well and would do everything to ensure that happened."

"That was Allan. He was so determined and always gave 100 per cent, but he pushed other people to give everything as well. He can motivate people."

Capello, who would go on to claim two ALMS titles with McNish (though not the 2000 crown courtesy of the vagaries of the points systems), puts his successes as a sportscar driver down to his relationship with the Scot.

"Allan had something that no one else I have ►

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ROBERTSON/GETTY

McNish drove Veloqx Audi during 2004



NO FUN IN DTM

"No, I didn't enjoy it!" Allan McNish's assessment of his year in the DTM with Audi and the Abt team in 2005 is damning. The year yielded a best result of fourth during a decent mid-season run, but he only just scraped into the top 10 in the end-of-season points.

Racing in the DTM was the only opportunity for a driver who had made a quick return to Audi after a year as an F1 test driver with Renault in 2003. McNish had raced for the Audi UK-backed Veloqx squad in his first year back, winning first time out in the Sebring 12 Hours, but there were limited options in sportscars for the following season.

"I wasn't going to sit twiddling my thumbs for a year," he says, "but racing at Oschersleben and Lausitz didn't hold the same attraction as competing at Road Atlanta and Sebring.

"I was effectively there to make up the numbers. There wasn't a level playing field. I had three test days before the first race and a further two tests after that, one of them being after the end of the season. 'Eki' [Mattias Ekstrom] did 18 in the same period.

"At the end of the year, I said I will do it again but only on equal terms. It goes back to that Las Vegas story [panel, p37]. You have to ask yourself, 'Why are you there?'"

Even when he had two doors, McNish struggled in DTM



TRIMETER/LAT

McNISH CAREER HIGHLIGHTS

2013 World Endurance champion and Le Mans 24 Hours winner

2009 Sebring 12 Hours winner

2008 Le Mans 24 Hours and Petit Le Mans winner

2007 ALMS champion and Petit Le Mans winner

2006 ALMS champion, Sebring 12 Hours and Petit Le Mans winner

2004 Sebring 12 Hours winner

2000 ALMS champion and Petit Le Mans winner

1998 Le Mans 24 Hours winner

1988 Formula Vauxhall Lotus champion

► ever driven with had," says the Italian. "He was ready to share everything with his team-mate. I won a lot of races with Audi, some of them with Allan and some without. But all of those victories are thanks to Allan. When I wasn't driving with him, I used everything I learnt from him. He was the one who taught me how to win sportscar races."

Put simply, McNish was the ultimate team player.

There was another weapon in the McNish armoury, reckons Juttner, which became clear to only insiders at Audi and Joest in California in July 2000.

"One area where he was exceptional was his ability to take an overview of any situation," he says. "He could always see the big picture, at the same time as being capable of going about the slightest shitty detail that wasn't quite right."

The big picture at Sears in 2000 wasn't evident to those outside the Audi set-up. The German manufacturer had a championship to win in the US, but it was languishing behind BMW – represented by the Schnitzer team with

a pair of V12 LMRs – in the points after reverting to an updated version of the previous year's R8R between Sebring and Le Mans. Pirro and Biela were the German manufacturer's best-placed duo in the points and the prospect of team orders was looming.

Juttner remembers discussing that very prospect with Audi Sport boss Dr Wolfgang Ullrich during the Sears weekend.

"We were talking about team tactics at that point already," he recalls. "I discussed it with Dr Ullrich, although not openly and certainly not with the drivers.

"But Allan knew there was a real prospect of us doing something like that. He knew that if he was far enough ahead it would be difficult for us to do something stupid with team orders."

McNish pulled it all together at Sears Point in 2000 and amazed the sportscar world. "It for sure was one that was an eye-opener to many people, including me," says Juttner. "It was perhaps the first time that we saw the Allan McNish that we would see so many times over so many years. It was crazy, really, what he did." ❦

McNish's greatest races

With scores of sportscar wins to his name, picking out Allan McNish's best performances is not an easy task.

GARY WATKINS, who saw most of them, gives it a shot



The big break

Laguna Seca 1997

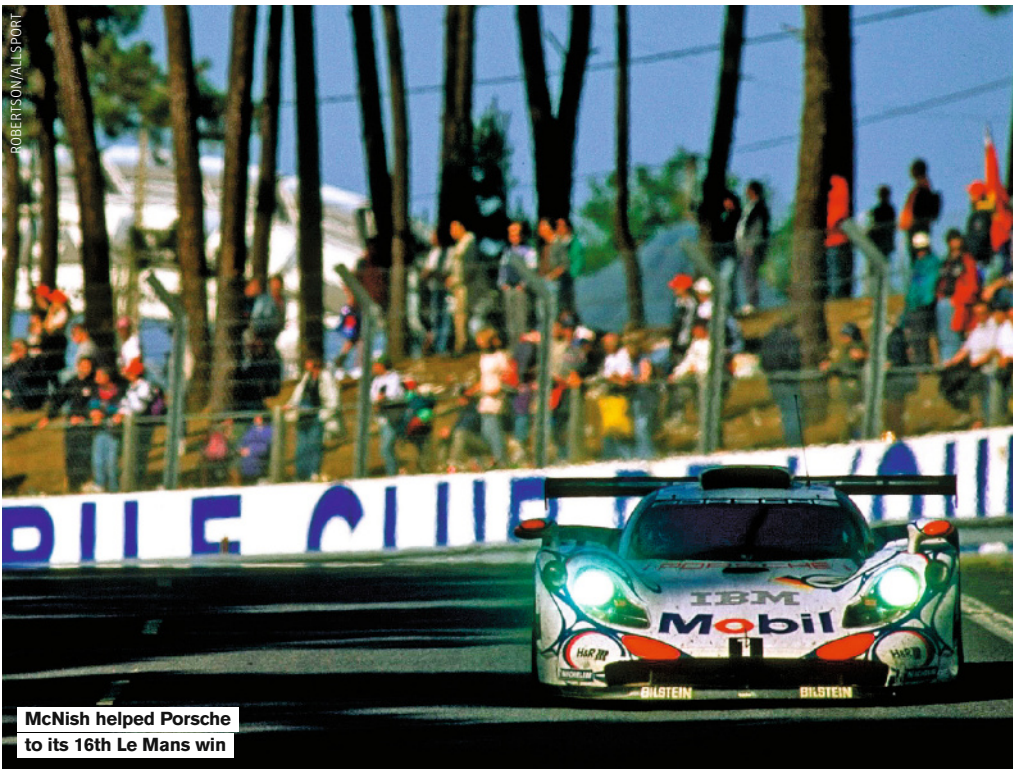
The FIA GT Championship finale at Laguna Seca in 1997 put Allan McNish on the sportscar map. Picked up by Porsche as test driver earlier in the season, he'd been brought into the factory race line-up for mid-season races at the A1-Ring and Suzuka, but it was aboard an extra car in California that he truly impressed.

The parts-bin special Porsche 911 GT1 Evo finally proved competitive in an FIA GT race in McNish's hands and the car, shared with Ralf Kelleners, was in with a shot of victory against the all-conquering Mercedes before a bungled pitstop. But the performance and a third-place finish was enough to persuade Porsche to sign him up for the full season in 1998.

McNISH'S VIEW: "That race was important. It effectively cemented my place in the Porsche team."

Laguna Porsche drive convinced the marque





McNish helped Porsche to its 16th Le Mans win

The first Le Mans victory

Le Mans 24 Hours 1998

The new 911 GT1-98 and its Michelin tyres didn't prove a match for the latest V8-powered incarnation of the Mercedes CLK concept on Bridgestones in FIA GTs, but the car was most definitely in the hunt around the long Circuit de la Sarthe. Witness McNish's table-topping time in what was then known as pre-qualifying six weeks ahead of the race.

An impressive stint in drying conditions in the night firmly establish the Porsche McNish shared with Stephane Ortelli and late-signing Laurent Aiello in a clear lead. A cooling-system issue delayed the car and allowed Toyota back into the game, but it ultimately couldn't deprive Porsche of a 16th Le Mans 24 Hours victory.

McNISH'S VIEW: "I was driving on instinct and talent alone. I don't think I had any understanding of strategy, so in that way 2008 was a much better Le Mans drive, and to be honest, 2013, as well for a different reason."

Showing his class

Sears Point 2000

McNish's sportscar credentials weren't in doubt when he arrived in the American Le Mans Series after signing with Audi for 2000. Yet it wasn't until he claimed his first series victory with the new R8 at Sears Point in July 2000 that America – and perhaps Audi – realised just how special he was.

It wasn't just that he and long-time partner Rinaldo Capello won from pole, it was the way McNish destroyed the opposition, Audi team-mates Emanuele Pirro and Frank Biela included, that was special. McNish put a whole

lap on Pirro in the space of a stint and a half. So shocked was the Italian that he thought his team-mate must have spun or been delayed.

McNISH'S VIEW: "It was important because it was the first victory together for Dindo and me. I think it said something to Audi and it set up my run to the championship.

"I guess I've had bigger wins, but that one is probably the best race of my career from a pure driving point of view and almost certainly one of the most important of my career."

"Victory at Sears Point was important – it said something to Audi and it set up my run to the championship" **ALLAN McNISH** ▶



Sears ALMS win was McNish's first for Audi

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His greatest race

Le Mans 24 Hours 2008

Many rate this as McNish's greatest-ever drive. Peugeot's 908 HDi was the quicker car at Le Mans in '08, but Audi pulled off a shock with its ageing R10 TDI to win again.

The German manufacturer and Joest Racing called it right tactically, but this win had a lot to do with the performances from McNish and team-mate Tom Kristensen.

Their car, ably co-driven by Dindo Capello, was the only one of the three Audis able to take the fight to the Pugs. The crew stayed in touch over the first 12 hours, then moved into the pound seats when the rain came. Ever-changing conditions ensured it remained close right to the end and made it one of the classic Le Mans encounters.

McNISH'S VIEW: "We had to be absolutely on the limit every lap – it was like a year of qualifying. There were other races where I dug deeper to pull results out of myself, but in terms of the whole package – using all the tools you have and understanding your strengths and weaknesses – there's no question it is my best race."



McNish and co-drivers wrung the neck of the Audi to win Le Mans

BLOXHAW/LAT



LECKA/GETTY

The forgotten one

Sebring 12 Hours 2009

After their great wins at Le Mans and Petit Le Mans in 2008, McNish, Kristensen and Capello won the other sportscar classic at Sebring with new R15 TDI to complete a grand slam in a thrilling battle with arch-rivals Peugeot.

The R15 didn't look a match for Peugeot's 908 turbodiesel, at least not for the first two-thirds of the race. Yet when the temperatures dropped as night fell, the German car came into its own and had the edge on soft-compound Michelin tyres.

"I remember getting in for my final stint and 'H' [engineer Howden Haynes] coming on the radio and saying: 'Allan, Sebastien Bourdais [in the leading Peugeot] has just done a 43.5,'" recalls McNish. "I had done a best of 1m45.2s or something up to that point, and had been straining my nuts to do that. I thought, 'Christ sakes', but we just got on with the programme."

McNish drove an amazing final stint in the knowledge that the Audi, unlike the pursuing French car, would need a late splash of fuel. A series of laps below the pole time built him the advantage he required. The Scot got in and out of the pits without losing the lead to give the R15 a debut victory.

McNISH'S VIEW: "We all drove very well that day, but we had a good car. Everyone slates the R15, but at Sebring that year I had the best-balanced sportscar I ever had in my career, perhaps even the best-balanced racing car of any kind."

"It was the first time that I'd ever managed to go around the outside of someone at Sebring's first corner. I had that much confidence in the car." ❧

The strangest comeback

2008 Petit Le Mans

Allan McNish was out of the car and kicking anything that came within range of his Nomex-booted foot just 40 minutes before the start after looping his Audi R10 TDI on the formation lap. Yet 11 hours later he was celebrating victory at Road Atlanta with team-mates Dindo Capello and Emanuele Pirro.

It was the result of an amazing comeback, or rather comebacks. The first was Champion Racing's repairs that got McNish out on track only two and a bit laps behind the leaders. The next was the drive by McNish and Pirro that put the car back on the lead lap in hour three.

There were further delays and more ground lost, but some exemplary pitwork from Champion clawed it all back once again. Crucially, the US squad then got McNish out on fresh Michelins for the 36-lap run-in.

What followed was the Scot at his best. He dispatched one of the Penske Porsches, team-mate Marco Werner and then Peugeot driver Christian Klien in quick order, and then fought a solid rear-guard action after one final safety car.

McNISH'S VIEW: "That's one I cringe and smile about at the same time. I thought we were dead ducks, but at the end there were three cars duking it out in the dark. It's special for me and hopefully for fans who were there."



McNish revelled in the soft-tyred R15 to overcome Peugeot

LEVITT

Meeke's last chance to deliver?

46

He's been on the international stage for a while, but never before has Kris Meeke had such stability in a factory-run World Rally Car. By **DAVID EVANS**



ALL PICS: MCKLEIN

Kris Meeke had gone from hero to zero. Again. This time there was no twisted metal, just misery. This was misery in the Mosel. Having been dropped by Citroen for failing to land the 2006 Junior World Rally Championship title, Meeke was in the wilderness. Doing the odd bit for Renault, he'd scraped together enough cash to breathe life into a tired Clio S1600 for Germany's JWRC round in 2008. He was pitched against the series' unstoppable force, Sebastien Ogier, and plenty of people questioned the wisdom of what looked to be final roll of the dice for the Northern Irishman.

Sitting on a near minute-and-a-half lead over Ogier with one stage to go, Meeke's gamble looked set to pay off. Then the Clio coughed and died. With a mile to go. Misery.

Talking to Meeke in service after that event was tough, largely because there were no words that were the right words.

Maybe it was time to knock it on the head. He hadn't had a bad run. Such sentiment was soon forgotten.

Being in the right place at the right time, he landed a seat in a 207 S2000 and won the 2009 IRC title with Peugeot UK. A year later and he'd



signed a deal to drive Prodrive's Mini John Cooper Works WRC.

Talk about a career turnaround...

A year later, and just six starts into what should have been a long-term deal, his seat was sold from beneath him.

Talk about a career turnaround...

It was the start of 2012 and, instead of starting his year in Monte Carlo, Meeke's only competitive outing was in Lurgan Park; that he beat Kenny McKinstry's Subaru into second place would come as little consolation.

"It did cross my mind that that might be it," says Meeke. "You know, coming back once was good for me, but twice?"

SPREADING HIS WINGS

And there was little to indicate there would be any chance of a comeback. Factory seats were rare enough to begin with, but for a 33-year-old whose wallet was nowhere near fat enough, the chance to rekindle his dreams and desires looked to be as good as finished.

Instead of dwelling on what might have been, Meeke turned his attentions to what could be. Jobless meant contractless and contractless meant the fulfilment of a long-held ambition to ride a motorbike 1200 miles non-stop down the California Peninsula in Mexico. A heroic effort netted Meeke 18th place

on his first attempt at the Baja 1000.

His profile was further boosted when he rattled a Bentley through the trees for BBC *Top Gear* a couple of months later. If Meeke wasn't welcome at the world rally party, he wasn't going to leave quietly.

A trip to Paris made it clear others wanted him to stay. Would he be interested in doing some testing for Peugeot's 208 T16? Yes, please. And, as you're here, how about some cross-party PSA co-operation: Citroen's DS3 R5?

Absolument.

Citroen Racing had become Yves Matton's domain and it was the jovial Belgian who had backed Meeke's JWRC campaign in the C2 through 2005 and 2006. Matton had been a Meeke believer.

And when Abu Dhabi driver and Citroen team backer Khalid Al Qassimi couldn't make Finland last year, Meeke's name was one of the first on a shortlist for Jyväskylä.

That third chance – the one Meeke hadn't seen coming – came. Again, there were the doubters. Even Meeke himself admitted he might have spied the word polonium on the side of the chalice he'd been passed.

Did he think twice?

There's a pause, then a grin.

"Not a bit of it!" he says. "It wasn't easy, though. I hadn't been in a World Rally Car for

18 months and to go to the world's fastest rally with a car I'd never driven competitively before was a pretty big ask. It was a one-shot thing, but there was definitely an element of being damned if you did and damned if you didn't."

MORE SPEED LESS HASTE

Meeke was asked to show some speed. Matton was keen to see if he still had it.

Second quickest through the first free-practice run answered that particular question early. And got Matton's attention. A DS3-bending roll near the end of the second run through Uninipohja held his attention.

At the point of running out of road, Meeke's pace had been under the stage record. That means over the countless jumps and curves that came before the tighter-than-expected right, Meeke had driven a Citroen faster down almost that whole stretch of road than anybody before. Including the God of Versailles Sebastien Loeb.

Meeke showed his speed. And all credit to Matton for keeping the faith to give him a shot in the factory team in Australia. But, when the dust settled on KM's second New South Wales shunt, the end was surely in sight.

Fortunately for Meeke, a couple of things went in his favour: he'd shown speed again (beating Ogier to fastest time in qualifying ticked that box) and the list of potential team leaders for ►



Germany 2008: the Clio died while Meeke was running ahead of Ogier



Peugeot IRC title glory came in '09



Citroen JWC deal went sour in 2006

► Matton to consider wasn't exactly long. So, Matton delivered the dream for the Dungannon driver.

Undoubtedly, that decision is a gamble: Meeke is a driver with just 40 starts at the highest level. Two years ago, Citroen started its WRC campaign with 275 starts between two of the most experienced drivers (Loeb and Mikko Hirvonen) in the business. This year, Mads Ostberg's 65 rounds take Citroen's tally to just over the ton.

And that lack of experience on Meeke's part will certainly tell in the early part of the season.

Once he's past next week's Monte, it'll be Argentina in May before he's back on familiar ground. And he's only been in South America once, for the IRC round.

"I've never been to Sweden, Mexico and Portugal," says Meeke, "so the approach will be different there. It's about getting experience. If you have a two-year deal then you look to

settle in for the first season before showing what you can do in the second – we're in the position where we have to settle in during the first half of the year and then show what we're capable of in the second half."

The good news is that Meeke's feet are already under the table at Citroen.

"I can honestly say that I feel completely at home in the car," he admits. "I couldn't have done the times I did last year in Finland and Australia if I didn't feel completely comfortable with the car. I really enjoy driving it and that's so important."

What should we expect from Meeke this year?

"I couldn't be in a better place right now," he says, "that's definitely right. This is really, honestly everything I've ever dreamed about, but I keep saying that getting this opportunity is just that – it's an opportunity. The Holy Grail is winning the world championship. This

opportunity means nothing if I don't do something with it. So, to say it doesn't get any better than this is wrong – it does, when you start performing on rallies, fighting to win rallies and then fighting to win championships."

More than anybody else, Meeke is aware of the importance of this season. This is the last roll of the dice. But, crucially, he gets to roll it 13 times in a year, not just once. The intense pressure of a one-off delivery is gone, but its been replaced with the weight of expectation that comes courtesy of a WRC title machine called Loeb.

"I'm not trying to emulate Sebastian Loeb," he says, "that's impossible. And I'm sure the team realises I'll need a bit of polish to reach my full potential, but you get everything thrown at you to do that with this team. It's an unbelievable place to be."

And now he's back at the party, he's keener than ever to stay there. ❧



MEEKE'S TOP-THREE RALLYING CAREER HIGHLIGHTS

Rally GB 2005

This event will be forever remembered for all the wrong reasons following the death of Michael 'Beef' Park. That tragedy overshadowed what was a strong and sensible drive from Meeke in a one-off Subaru outing. He ended the event ninth, but less than 30 seconds off the top six on his World Rally Championship debut in a World Rally Car.

Rally Sanremo 2009

This was Meeke's fourth IRC win of his rookie year in the series with Peugeot UK. It was also the event in which he lifted the title to celebrate the first major international rally series win for a Brit since Richard Burns' world title eight years earlier. Meeke showed massive maturity and pace to dominate in the Ligurian Alps - the win and title returning him to the forefront of team managers' minds.

Rally d'Italia 2011

The debut event for Prodrive's Mini John Cooper Works WRC and Meeke is on the money on the second stage. Beaten only by Mikko Hirvonen and Sebastian Loeb, Meeke's time through Monte Grighini Nord is almost a second per mile quicker than his team-mate Dani Sordo's effort. Unfortunately a throttle problem forced him off the road on the next test.

EVANS BRITAIN'S OTHER WRC HOPE

Elfyn Evans' birthday came three days after Christmas. Which was just as well, because he definitely landed the best combined present of his life earlier last month – when he was named as an M-Sport works driver for this year's World Rally Championship.

British drivers in the WRC and buses make for an obvious comparison right now; having waited for a front-line factory driver for the past decade (Matthew Wilson drove for the M2 Stobart team), two have come along at once with Meeke rivalling Evans at Citroen.

Meeke is naturally chuffed with his own gig, but rightly says Evans has landed the big one: a factory seat at 25 is what every driver dreams of. He doesn't need to tell Elfyn, the former WRC Academy champion is well aware of the opportunity he's been afforded. He only has to look to the head of his family's table to see what might have been; Gwyndaf Evans, his father, was arguably Britain's brightest and best rally talent never to be fully recognised on the world stage.

But it still requires some taking in.

"I still think about the reality of what's going to happen come Monte time," says Evans, "and it's hard to picture sometimes you know. It's easy to talk about it and say: 'oh yeah, World Rally Car this year...' but it's a

proper, proper drive and I can't stress how much I'm looking forward to it. This is putting me in the best possible place to learn."

He's not wrong. Not only is Evans a cert for all 13 rallies in one of the world's fastest rally cars this year, he's in it for the long-run thanks to M-Sport MD Malcolm Wilson's legendary view of the bigger picture. Wilson's spotted something in Evans, something that he spotted most recently in Thierry Neuville. Or, if you want to go back a bit further, Jari-Matti Latvala and Mikko Hirvonen. Further still? Francois Duval, Markko Martin and Petter Solberg. Wilson's been there, seen it and signed it.

If he's honest, Wilson might admit this chance has come a season early for Evans. Another year around the WRC would have been the perfect apprenticeship, but the seat had to be filled and Wilson's never been shy of taking a punt. "Elfyn's is a two-year deal," says Wilson, "but that's really just the start – we're looking to be working with him for a long time."

Evans has been on Wilson's radar for some time, and having just finished polishing the emerging diamond that is Neuville, the Cumbrian is delighted at the opportunity to do the same with a driver born on our side of the Channel.



"I've told Elfyn to model himself on Thierry," says Wilson, "and he's not doing a bad job so far."

Evans's dedication to the chance he's been given is second to none, but he remains realistic. "I will need some time against these guys," says Evans. "It's not going to happen overnight and I'll need some support while I get up to speed. We might have to be patient."

Sixth on his World Rally Car debut in Sardinia last season, allied to some exceptional WRC2 performances, indicate that patience might not be tested too much. But Wilson insists that there's no expectation for 2014. It's a year of learning his lines.

Pretty much the exact opposite to Evans's countryman in the red corner.

"It's a proper, proper drive and it's putting me in the best possible place to learn" **ELFYN EVANS**



Evans's World Rally Car debut in Sardinia last year brought sixth-place finish

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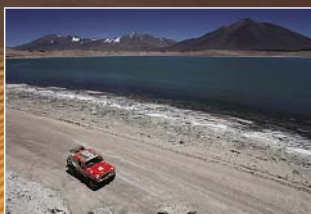
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SURTEES – ON STAGE

The racing icon to star on AUTOSPORT Main Stage on Saturday and Sunday

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RALLY GB CARS – OFF STAGE

Ogle some of the best world rally championship machines, including title-winning Subaru Imprezas



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INDOOR ACTION

Full guide to the thrills and inevitable spills of the Live Action Arena



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TECH FEVER
Why AUTOSPORT Engineering rocks



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CLUB STARS
All the key national racing launches

Surtees clinched his famous 1964 F1 title in Ferrari 158



Let AUTOSPORT International kick off your 2014 at the NEC



Christmas might only just have gone, but it's already time to look ahead to the 2014 season. The Monte Carlo Rally gets under way next week, but before that AUTOSPORT International kicks things off at Birmingham's NEC.

Star of the show is likely to be the John Surtees Celebration, marking 50 years since 'Big John' added the Formula 1 title to the seven crowns he won on two wheels. Over from America will be the Ferrari 158 in which he completed the unique achievement, while the rest of Surtees' career will be charted, from his first Triumph motorbike through Lotus 18 and Lola T70 to the F1 and F2 single-seaters that bore his name.

The *F1 Racing* Stand is always one of the highlights and this year should be

even more popular this year. With F1's new rules package consigning the 2.4-litre V8s to the history books, Birmingham will provide one of the last occasions you can catch representatives from the 2013 grid in one place.

The AUTOSPORT Stage, again in association with KX, will feature Henry Hope-Frost interviewing some of the key figures from our sport. Adrian Sutil, Petter Solberg, Allan McNish, Tom Kristensen, Martin Brundle and Jonathan Palmer are just some of the names you'll have the chance to hear from – just look at Henry's guest list on the right...

National motorsport always plays a big role in Birmingham and this year Caterham, Radical and Chevron join the usual set of racing clubs and series.

As ever, the Historic Sports Car Club puts on a multi-car display, this time to show off the spread of machinery it runs races for, while the UK's premier series – the BTCC – will be represented by a number of cars and most of the 2014 drivers. Be sure to look out for the Honda Civic Tourer, the estate that Matt Neal and Gordon Shedden will drive this year.

For those wanting to get more involved, there is the Live Action arena, Celebrity Karting Challenge, and the Caterham Driving Experience. Add in AUTOSPORT Engineering, the Coys Auction and Performance Car Show and you may have trouble fitting it all in.

Kevin Turner
Features editor

MY PICKS



Racing legend: Surtees



F1 racer: Sutil



Ex-WRC champ: Solberg



Le Mans star: McNish



“Come and get close to the action and fire a question at my victims”

Chatting to almost 100 different guests – from every conceivable motorsport discipline – over four packed days on the AUTOSPORT stage is my perfect antidote to the festive slumber. Nothing fuels the early-season fever like a one-to-one with a Formula 1 world champion, a Le Mans legend, a World Rally whizz, a Touring Car tearaway or a team top-name in front of the super-enthusiastic fans who make the show what it is. And this year, my ninth as compere, promises more 2014 launches, driver announcements, reminiscing about the past and general fun and games (I'll leave you to work out who'll do what

from the list below). Come and get close to the action and fire a question or two at one of my victims (I do need the odd break...) and you could win British GP tickets courtesy of Silverstone and British Touring Car tickets thanks to TOCA.

- Kenny Brack** Former Indy 500 winner
- Martin Brundle** Sky Sports F1 pundit
- Andrew Jordan** British Touring Car champion
- Tom Kristensen** Nine-time Le Mans 24 Hours winner
- Allan McNish** World Endurance champion
- Matt Neal** Three-time BTCC champion
- Gary Paffett** DTM racer/McLaren

- F1 test driver
- Jason Plato** Double BTCC title winner
- Andy Priaulx** BMW sportscar ace
- Gordon Shedden** 2012 BTCC title holder
- Petter Solberg** Former World Rally champion
- John Surtees** 1964 F1 world champion
- Adrian Sutil** Sauber F1 driver
- Derek Warwick** Ex-F1 racer/Le Mans 24 Hours winner
- Malcolm Wilson** M-Sport boss

*Appearances correct at time of going to press.

Henry Hope-Frost



WEC champions: McNish and Kristensen



Indianapolis 500 winner: Brack



Mercedes DTM ace: Paffett



AUTOSPORT STAGE TICKET GIVEAWAY

Head over to our stage with some questions for our guests for the chance to win tickets to the **British Grand Prix** and tickets to a round of the **British Touring Car Championship**.

Rally GB celebration

The 70th running of Britain's premier rally event, Rally GB, will be celebrated in Birmingham with a display of some of the best rally cars ever to grace these shores. **DAVID EVANS** takes a look

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Yes, I know, it's January. And you want it to be November again. You want to be behind the trees, watching a car attack an apex at 45 degrees; you want to smell the mud on the exhaust and listen to the bark and bellow of a World Rally Car.

Well, you can't.

Like I said, it's January, not November.

What we can offer you is the next best thing – the chance to see up close some of the cars that have starred on Britain's round of the World Rally Championship.

Wales Rally GB is a jewel in the WRC crown, courtesy of its legendary mix of harsh and sometimes horrible conditions combined with some of the fastest and most fickle forest roads around. First run in 1932, the event still known across the globe as the RAC has spawned heroes ever since. And here are some of the wheels that helped make those heroes.





Subaru Impreza WRC 97

This is the car in which Colin McRae won his third RAC Rally. It's also the car in which he missed a second world title by a single point. That the Scot dominated Britain's Cheltenham-based WRC round – after his countryman and rival Richard Burns suffered a puncture in St Gwynno – would come as little consolation. This Impreza WRC 97 was the first car to win in the World Rally Car era and helped Subaru to a hat-trick of makes' titles. But a series of mid-season engine failures undoubtedly cost McRae his chance of becoming a two-time champ. ▶

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Ford Fiesta R5

M-Sport's Fiesta R5 remains the class of the R5 field... not only because it's a stunning car, but also because the Cumbrian firm remains the only company to have designed, built and run one – despite the best efforts of manufacturing giants Peugeot, Citroen and Skoda, whose R5 cars remain in the pipeline. This latest Fiesta rally car might look like the RS WRC you'll find on the M-Sport stand, but it's 90 per cent new and includes a 32mm-restricted engine developed at M-Sport's Cockermouth factory, mated to a five-speed Sadev transmission. This particular car is Irishman Robert Barrable's Tunnocks-backed example.



Citroen DS3 R3

Ironically, courtesy of its hydraulically operated gearshift, there's probably more high-tech transmission kit inside Jukka Korhonen's Citroen DS3 R3 than there is on the French firm's World Rally Car. And this machine is the pick of R3 motors. It's front wheels are driven by a 1.6-litre turbocharged engine that produces plenty of torque and the odd bit of wheelspin. Korhonen used this car to lift the British title last year and went on to win the WRC3 category on Rally GB. Citroen's pocket rocket was the weapon of choice throughout last year's WRC3 fight, with Sebastien Chardonnet taking the title in his DS3. ▶

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Subaru Impreza WRC 2001

See that bonnet? That's the very bonnet the late and very great Richard Burns kissed in a soggy Margam Park on Sunday November 25, 2001. A minute or two earlier, he and co-driver Robert Reid had become world champions. This 2001-specification Subaru, codenamed 44S, was a revolution in the life of Impreza World Rally Cars; it was the first four-door WRC machine Prodrive ever prepared for Subaru. And it was the car that, courtesy of designer Christian Loriaux, forced a rethink on the centre of gravity in road cars – take a look inside and you'll see pretty much all the dash is on the deck. Now compare that with the WRC 97. This car only won one event (New Zealand) in 2001, but RB's consistency was enough to secure the title on Rally GB.

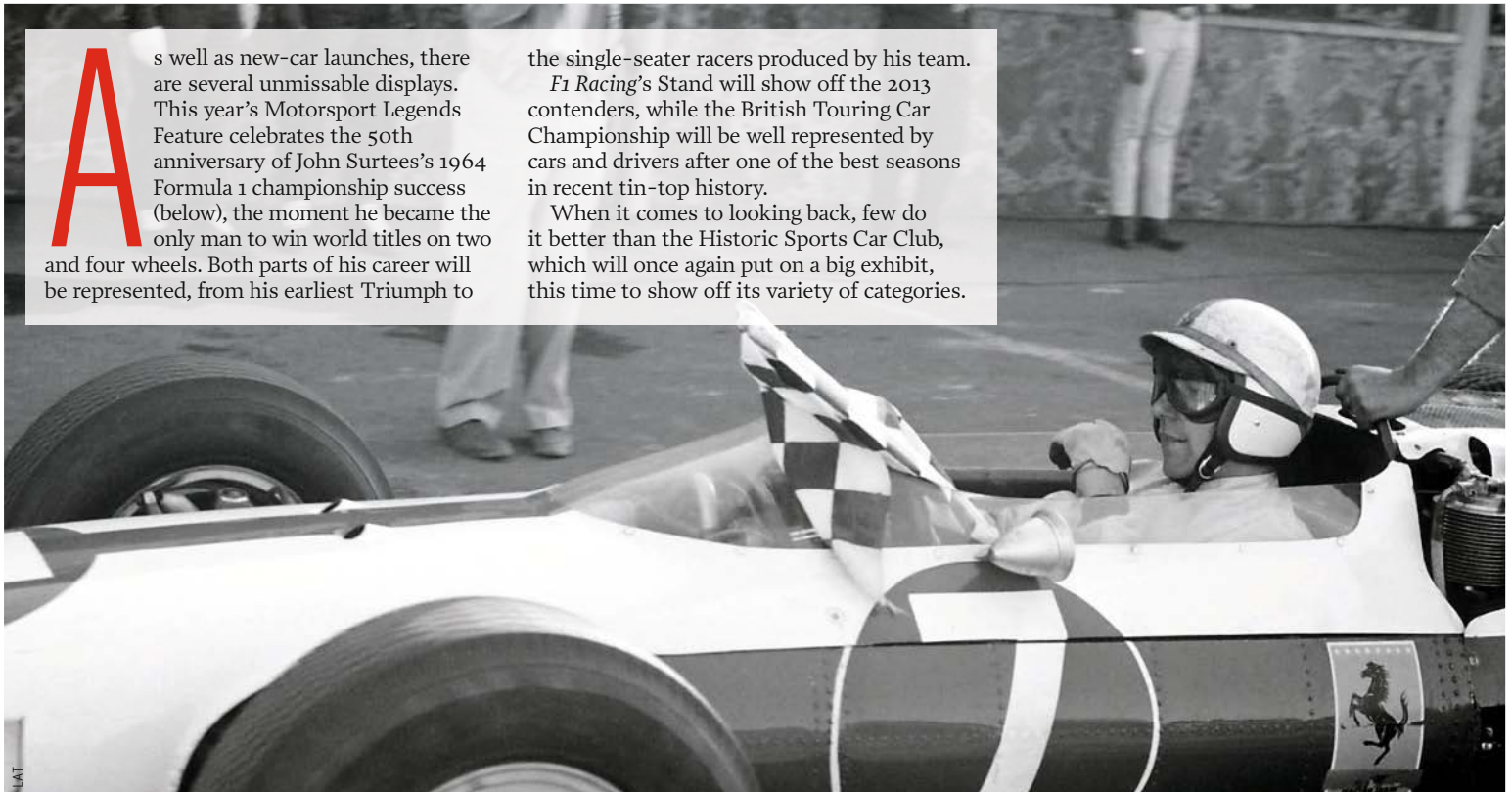


As well as new-car launches, there are several unmissable displays. This year's Motorsport Legends Feature celebrates the 50th anniversary of John Surtees's 1964 Formula 1 championship success (below), the moment he became the only man to win world titles on two and four wheels. Both parts of his career will be represented, from his earliest Triumph to

the single-seater racers produced by his team.

F1 Racing's Stand will show off the 2013 contenders, while the British Touring Car Championship will be well represented by cars and drivers after one of the best seasons in recent tin-top history.

When it comes to looking back, few do it better than the Historic Sports Car Club, which will once again put on a big exhibit, this time to show off its variety of categories.



Star cars to look out for

There aren't many opportunities to see some of motorsport's best machinery at this time of year, so AUTOSPORT International is the place to be to get an early 2014 fix



JOHN SURTEES CELEBRATION

One of the undoubted stars of the show will be the Ferrari 158 in which Surtees scored his famous F1 title. He scored two wins before the nailbiting Mexico finale and the car's current owner, George Barber, is having the machine flown over from the US for a

series of celebrations in 2014.

"I've got very fond memories of the 1964 season with Ferrari, and seeing my 158 from that year is always a special occasion," says Surtees. "I'm looking forward to having it alongside many of my other race cars and bikes

at AUTOSPORT International, and sharing stories about the entire collection with fans of the sport."

Other four-wheeled highlights will include Surtees's first F1 car (the 1960 Lotus 18), an example of the Lola T70 that he helped develop into

a Can-Am winner, and a Surtees TS7, the model 'Big John' took to victory in the '70 Oulton Park Gold Cup (above).

Motorbike fans shouldn't be disappointed either, with Triumph, Norton and MV Agusta machinery joining a rare 500cc BMW Rennsport.

F1 RACING GRID

The 2.4-litre V8-engined F1 era is gone, replaced by the 1600cc V6 turbocharged engines that will hit the track later this month. Birmingham this week therefore offers perhaps the last chance to see the V8s together, with every 2013 team represented.

"There's nothing quite like the detail of a Formula 1 car, and the *F1 Racing* display will give fans a rare opportunity to take a close look at cars," says AUTOSPORT International director Ian France.

Head to stand 6020 to see what he means.



DUNBAR/LAT

HSCC

Leading historic racing club the HSCC is planning to bring 11 cars, ranging from diminutive single-seaters to big-banger sportscars via tin-tops.

An ex-Tasman Lola T332 Formula 5000 provides some muscle and will be a stark contrast to a Formula Ford 2000 Reynard SF79. Jim Chapman's Lotus 59 is back in its original Gold Leaf Team Lotus colours as used by Dave Walker and the late Bev Bond, but is now probably better known as the James Hunt car in the film *Rush*.

Sportscar fans are catered for with a Shapecraft Lotus Elan, displayed in Tour de France specification, a Chevron B19, first raced in South Africa and then driven by Mike Wilds, and the monster six-litre American Huffaker Genie sports-racer.

Touring cars aren't forgotten either, with Neil Brown's Lotus Cortina (freshly rebuilt after a big Thruxton crash) joining a more modern ex-Fabrizio Giovanardi Alfa Romeo 156 Super Tourer.



DUNBAR/LAT

BTCC IN BIRMINGHAM



JEFF BLOXHAM

The new Honda Civic Tourer has caused something of a stir since the factory squad announced it will run the estate for former BTCC champions Matt Neal and Gordon Shedden in 2014. The first Tourer will be on display at the Rimstock stand, while the older Civic Coupes of Shedden and reigning champ Andrew Jordan will be on the

Dunlop MSA BTCC stand, 6440. The liveries of Rob Austin's Audi A4 and BTCC newcomer Simon Belcher's Toyota Avensis will also be revealed, while most of the current drivers are expected over the weekend. So keep your eyes peeled and check the BTCC stand for when your favourites will be in the signing area.

Indoor racing action set to thrill



Always one of the most exciting elements of AUTOSPORT International, the indoor action promises more in 2014. Here's a guide to what you can expect to see this weekend

GRIFFITHS/LAT

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GRIFFITHS/LAT

Birmingham in January may not be a natural setting for your first motorsport fix of the season. However, throw a roof into the equation and it's a different story. The Live Action Arena has grown to become one of the central attractions of AUTOSPORT International, and this year it plays host to a superb line-up of Formula 1, supercar and stunt machinery. The privilege of headlining the bill falls to the legendary Lotus 49 and 79, which were driven by F1

PERFORMANCE TIMES

Thursday January 9
1400

Friday January 10
1400

Saturday January 11
0930, 1115, 1300, 1445,
1630 and 1815

Sunday January 12
0945, 1130, 1315,
1500 and 1645

champions Graham Hill, Mario Andretti and Emerson Fittipaldi and collectively claimed 18 grand prix victories, two drivers' and two constructors' championships.

Motoring magazine *Autocar* will present the 10 most exhilarating cars to drive, including the 468bhp Porsche 911 GT3 and the fastest production Aston Martin, the V12 Vantage S. Also on show will be the Mercedes Benz A45 AMG, Toyota's GT86, the Radical RXC and the 311bhp Caterham Seven 620R.

Last year's McLaren AUTOSPORT BRDC winner Matt Parry and the five other finalists – Jack Aitken, Jake Hughes, Chris Middlehurst, Seb Morris, and Charlie Robertson – will meanwhile put 425bhp

F2 cars through their paces.

On top of that, the Live Action Arena will feature an eclectic mix of drifting and stunt performances, including demonstrations from Team Japspeed, Guinness world record holder Terry Grant and the UK FMX motorcycle team. Also in action will be the BriSCA and Autograss competitors and a special BMW versus VW challenge.

Sky Sports F1 commentator David Croft will host proceedings alongside *The Gadget Show's* Pollyanna Woodward, with the duo being joined by celebrity guests.

It's a weekend's worth of action crammed into one hour – and the best part is it's free with any general admission ticket.

KARTING CHALLENGE

The annual AUTOSPORT International celebrity kart race will again be a star-studded affair, with funds raised being donated to Alzheimer's Society, leading the fight against dementia, in honour of the late Dan Wheldon. The Briton, a two-time Indianapolis 500

winner and an IndyCar champion, was a strong supporter of the cause.

Taking place on Friday evening on a specially-constructed kart track in the Live Action Arena, the three-hour race will feature a host of top-notch drivers and special guests from the worlds of

motorcycling, football and television.

Teams will consist of four professional drivers, each accompanied by two members of the public. Celebrity drivers include Le Mans 24 Hours winner David Brabham, two-time World Superbike champion Troy Corser, former footballer-

turned-pundit Robbie Savage, and Sky TV presenter Charlie Webster.

There's a prize up for grabs too, with organisers Teeside Karting offering the winners a free team entry to the British and Le Mans 24 Hour karting races.

Stand well back...



GRIFFITHS/LAT

Last year's winning team celebrates the traditional way



GRIFFITHS/LAT

CATERHAM EXPERIENCE

It's one thing watching race cars being pushed to the limit, but at AUTOSPORT International you can get even closer.

If you're hungry for more, head down to Hall 4 for the chance to take a passenger ride in a Caterham Seven for just £10. A team of pro drivers will be on hand to thrash the light and nimble machines – capable of cracking 62mph in under three seconds – around a bespoke course. And the indoor track has been designed for drifting, so strap in.

If that wasn't enough, a limited number of guests will get the chance to clamber behind the wheel and master the art of oversteer in the Caterham Donut School.

You don't even have to book early – just head to the hall and add your name to the list. Caterham will be offering onboard video footage, so passengers can relive the thrills at home.



STALEY/LAT

Engineering excellence

Motorsport has always been about technical innovation, which is why the AUTOSPORT Engineering exhibition is so important

Wirth Research – the company founded by F1 and sportscar designer Nick Wirth – will be exhibiting at ASI for the first time in 2014. Wirth will display its work in composites and Computational Fluid Dynamics (CFD) technology, and show how they're applied beyond racing.

Meanwhile, former Caterham Cars top-dogs Ansar Ali and Mark Edwards will unveil the new ultra-light Zenos E10 sportscar. The track focused, road-legal, open-top two-seater is powered by a mid-mounted, two-litre Ford engine producing 200bhp. Weighing only 650kg, it delivers a power-to-weight ratio of 300bhp/tonne. A single aluminium extrusion 'backbone' is central to the car's innovative architecture. Regular ASI exhibitors Alcon, Bilstein, Corbeau will again appear, while Research firm Revolutionary Technologies United will

air its latest thermodynamic process via three new engines. The engines feature the American-Slovakian company's patented Pseudo Adiabatic system, which utilises lower combustion temperatures to increase efficiency, durability and power, while reducing fuel consumption and emissions.

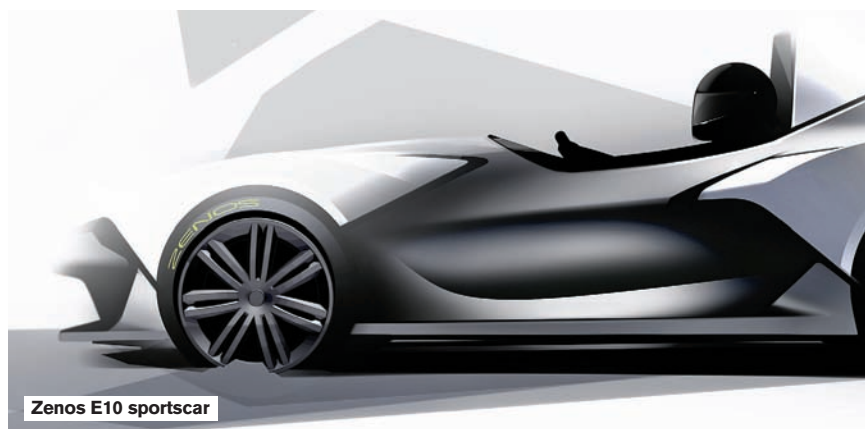
Perhaps the most intriguing innovation will come from sustainable energy company FibrLec. Scientists from Bolton University have created a flexible fibre that harnesses energy from movement, which could have applications in racewear and tyres. The University will also unveil its Centre for Advance Performance Engineering (CAPE, which includes a campus race team) with Porsche racer and *Emmerdale* actor Kelvin Fletcher. The CAPE stand will also feature the Bolt supercar, which will attempt to break the world land-speed record for production cars.

Whether it's engines, gearboxes, brakes, exhausts, wheels or data logging that's your thing, all tastes are catered for at AUTOSPORT Engineering.



Tech-heads can see engines...

FERRARO/LAT



Zenos E10 sportscar

Keegan lid is for sale



LAT

COYS AUCTION

The Coys Auction at AUTOSPORT International always throws up some rare and exciting treats for enthusiasts.

Last year, we had Queen frontman Freddie Mercury's old Rolls Royce. This year, we have the sole surviving 1969 Lancia Fulvia Spider Fiorio & Maglioli.

Only three 'F&Ms' were built. The first two were identical but the third was slightly modified. The story goes that Cesare Fiorio and Claudio Maglioli (team manager and driver respectively at the official works Lancia team, Squadra Corse HF) noticed the team's drivers suffered heat exhaustion at the Daytona 24 Hours in 1969 and feared the same problem in the forthcoming Targa Florio.

Fiorio and Maglioli decided to take the roof off the HF coupe and shorten the chassis by 28mm,

thus making it lighter. The body was stiffened with rigid tube and everything superfluous taken off, making the Lancia competitive against faster rivals.

The car on sale, chassis '00200', was the second of the three produced and had an unrivalled and celebrated racing history with the works Lancia team: ninth overall at the 1969 Targa Florio, second at the 1969 Monte Carlo Rally, a class win at the Nurburgring 1000Km, and victory in the 1969 Rally del Mediterraneo.

A 1970 Lancia Fulvia Coupe (a never-raced, Fanalone road car), and an original ex-Innes Ireland Lotus 20 FJunior car (capable of running at the front in historic races) are among a long list of exotic cars that go on sale on Saturday at 1230.

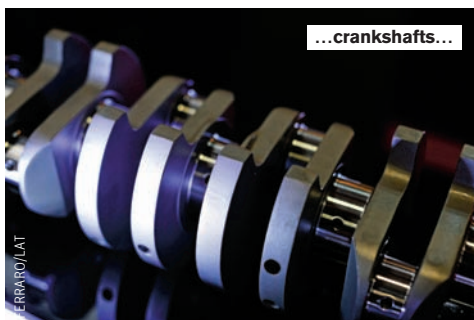
Unusual lots include ex-Alex Caffi Footwork overalls and Rupert Keegan's 1982 F1 helmet.





...racing suspension...

FERRARO/LAT



...crankshafts...



...transmission internals...

FERRARO/LAT

...and precision engineering
in a variety of shapes and sizes

FERRARO/LAT



Lancia Fulvia Spider F&M

THE PERFORMANCE CAR SHOW

Powered by **PistonHeads.com**



The *PistonHeads* Performance Car Show is the place for all road-car nuts heading to Birmingham for AUTOSPORT International.

'Britain's Best Driver's Cars' will take to the Live Action Arena as part of the Performance Car Show. Parading through the 5000-seat Live Action Arena will be *Autocar's* shortlist of the most exhilarating cars currently on sale – based on power, poise and the unexplainable 'x-factor' (as judged by the magazine). The 10-car feature will include supercars such as the 468bhp Porsche 911 GT3 and the Aston Martin V12 Vantage S, as well as the Mercedes-Benz A45 AMG, featuring the most powerful four-cylinder engine in production, the Toyota GT86, Jaguar F-TYPE S, Porsche Cayman S, and the Ford Fiesta ST Mountune.

Ariel, Caterham and Radical will showcase road-going track cars that have been taken to the next level: the Atom 3.5 SC (Ariel), the 311bhp supercharged Seven 620R (Caterham), and the RXC (Radical), while Vauxhall will display its new VXR8 GTS. Based on Vauxhall sister company HSV's new GEN-F GTS, the VXR8 GTS is the most powerful production car to emerge from Australia.

The Performance Car Show will also give enthusiasts an opportunity to see Abarth's 595 50th Anniversary Edition (top). Marking 50 years since the launch of the original Abarth 595 at the Turin Motor Show in 1963, the legendary Italian car manufacturer unveiled the limited-edition model (only 299 will be built) at the 2013 Frankfurt Motor Show.



National sport's great racing exhibition

The halls of the Birmingham NEC usually represent the spark that helps launch the club and national season, and 2014 promises to be no exception to the rule

There is always a great celebration of the variety and quality that national motorsport in the British Isles has to offer. This year will be no different, as once again AUTOSPORT International plays host to a superb collection of our sport's best domestic offerings.

UK manufacturers Caterham, Chevron and Lotus will once again be touting the best efforts that 12 months of work in their respective factories have produced.

Caterham's varied involvement in motorsport will be represented in typically grand style, with its brand new AeroSeven concept car joining its Formula 1 machine, SP/300.R trackday car, Superlight R300 racer, Seven 485 SV and Caterham kart on display.

A more specific offering comes courtesy of Chevron, which heads to the show armed with

its new V8-powered GT3 and GT4 models. The firm will be present at stand 2650 as the British marque ramps up its attempts to get into frontline GT racing. The new cars were put through a rigorous testing programme last year, with AUTOSPORT International the first opportunity to see them on display.

Lotus will also be showcasing its new Elise S evolution track car – the Cup R – which will join versions of the Exige V6 and R Cup cars as well as the Evora GT4 on stand 2400.

Ariel Atom and Porsche are among the other car makers to have their dedicated UK championships make their presence felt in Birmingham. A special version of Atom's 3.5 model will feature on its main stand, while the Atom Cup – which was launched at ASI 12 months ago – has a dedicated display for its unique championship.

Sportscar behemoth Porsche is bringing

both national and club elements to ASI, as the new-for-2014 Porsche 911 GT3 Cup car – to be used in the Porsche Carrera Cup GB – gets a public display on the Porsche Cars stand (2545), while the Club GB part of the German marque will have its own separate showcase (stand 19560).

There's a competition to win a paid-for season's racing in the Volkswagen Cup UK in one of performance exhaust specialist Milltek Sport's KPM-prepared VW Golf GTIs. Head over to the Hall 8 stand (8540) for the chance to win the drive in the popular tin-top championship, which itself will have a 2014-spec Scirocco R and Golf GTI Mk VI on display on its own stand (2740) as well as a roadgoing Golf GTI Mk VII conversion.

Milltek's competition is not the only one on offer. Motors TV is running a contest for budding race commentators to help front



New Carrera Cup car



A wide range of Caterham machinery will be in Birmingham

its coverage of the 2014 British GT Championship. Half of the dedicated racing television channel's stand (2765) will be transformed into a professional TV studio and commentary booth, where you can try your hand in front of the camera and behind the microphone.

British motorsport's governing body the **Motor Sports Association** is back, on stand 2840, while its initiative to get people involved in motor racing – **Go Motorsport** – has a dedicated stand once again (7450).

Many of the organising clubs that provide the bedrock for UK motorsport will be present at ASI. The usual big players on the national scene – the **British Automobile Racing Club**, **British Racing & Sports Car Club** and **750 Motor Club** – will all have stands at the NEC. In addition, the **Historic Sports Car Club** returns with a typically evocative display dedicated to the variety of cars that race within its championships, from monster Formula 5000 single-seaters to 1960s tin-tops.



Chevron's big push



VW Racing Cup drive to win



BRSCC is a show supporter

How to locate the best in show

It's not always easy finding your way around the labyrinth of Birmingham's NEC, so here's our map to guide you to some of the headline attractions at AUTOSPORT International

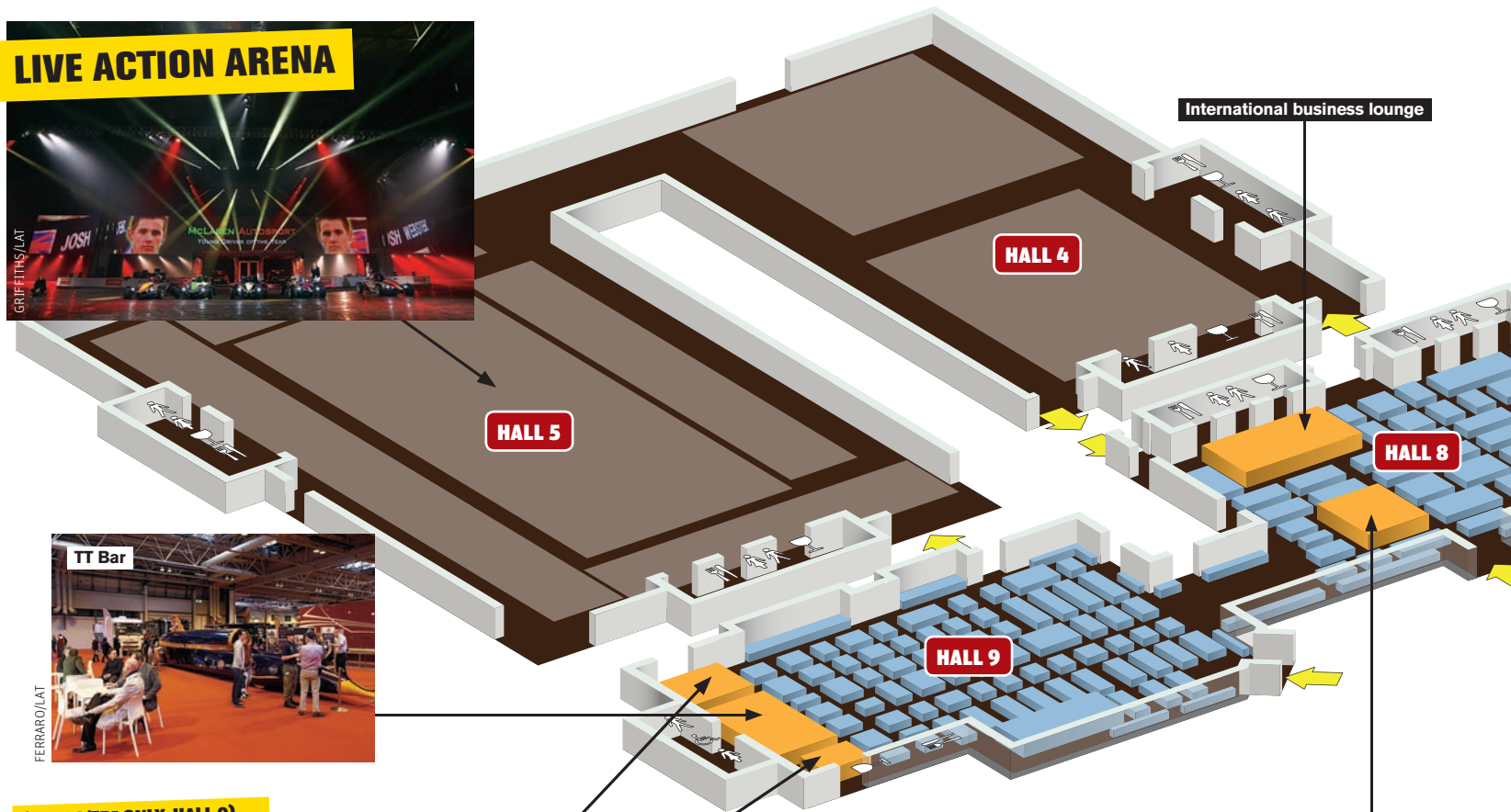


GRIFFITHS/LAT



LIVE ACTION ARENA

GRIFFITHS/LAT



TT Bar

FERRARO/LAT

(THURS/FRI ONLY, HALL 9)



Technical displays

GIBSON/LAT



Rally car display

GIBSON/LAT



AUTOSPORT STAGE

GRIFFITHS/LAT

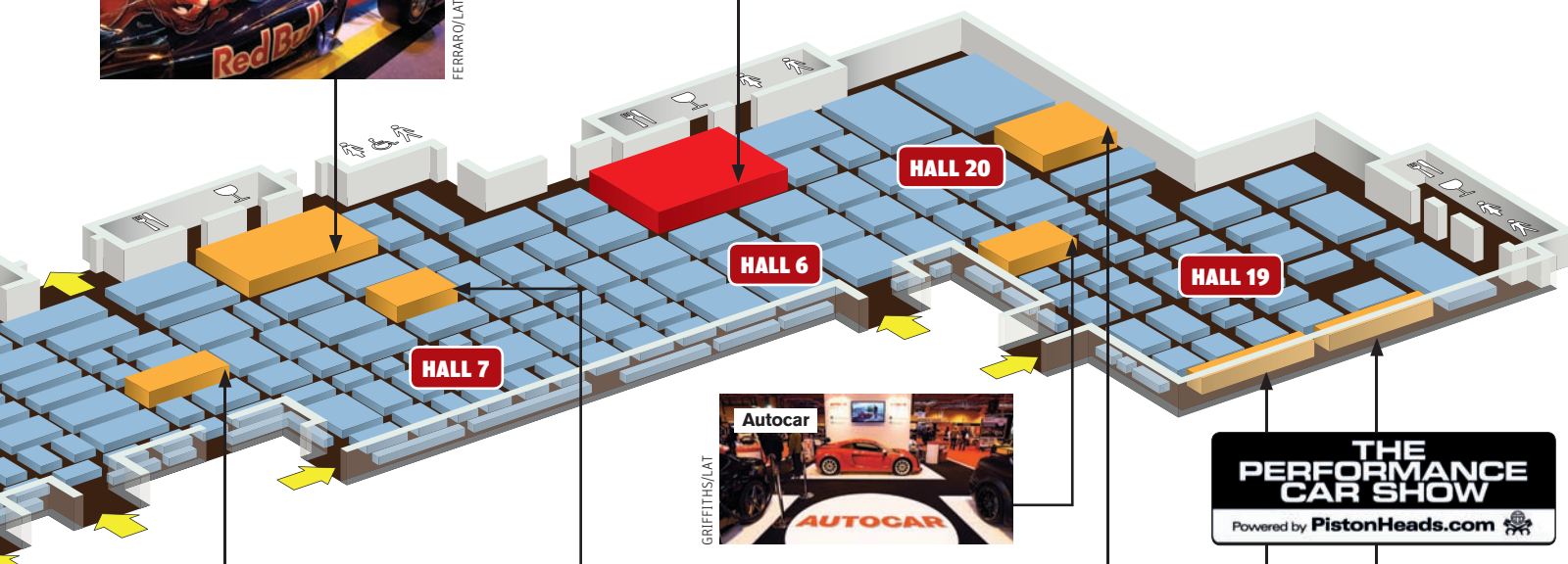


F1 Racing display

FERRARO/LAT



AUTOSPORT STAGE WITH KX



Autocar

GRIFFITHS/LAT



THE PERFORMANCE CAR SHOW
Powered by PistonHeads.com



Go Motorsport

GIBSON/LAT



BTCC display

HAWKINS/LAT



John Surtees feature

LAT



PistonHeads heroes

BLOXHAM/LAT

ROUTE FINDER

BY CAR

The NEC is easily accessible from junctions 6 and 7 of the M42, which connects to the M6, M40 and M5. The A45 also passes the NEC. Alternatively, you can type B40 1NT into your sat nav.

BY TRAIN

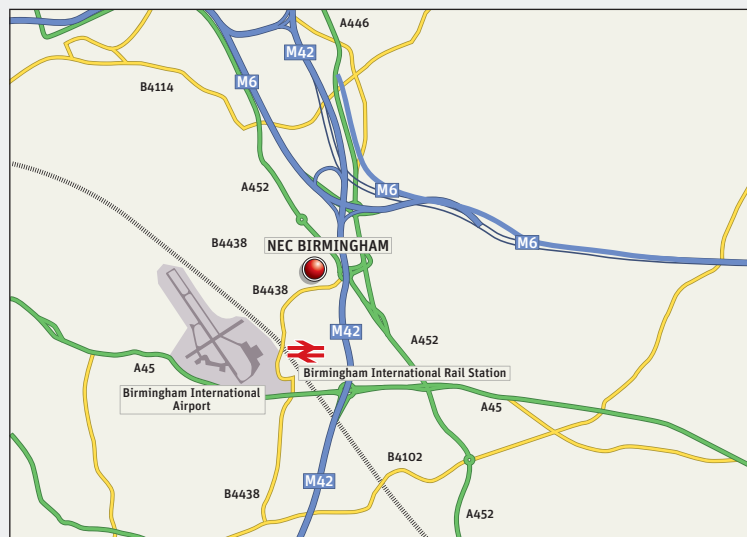
The NEC is a few minutes' walk from Birmingham International Station. Connections from Birmingham New Street run regularly and take 10 minutes. New Street has excellent links to all major UK cities.

BY PLANE

The NEC is a short drive from Birmingham International Airport. The easiest way to reach the venue is by the Air-Rail Link, a free shuttle service running every two minutes between 0515 and 0200. For scheduling call 08445 766000 or log on to birminghamairport.co.uk.

BY COACH

National Express runs regular services to Birmingham city centre and the airport. For information, log on to www.nationalexpress.com.



VBOX MOTORSPORT

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VBOX HD

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VBOX SPORT

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VBOX LAPTIMER

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www.vboxmotorsport.co.uk

AUTOSPORT
INTERNATIONAL
The Racing Car Show
Visit us on stand 7535

A-Z of exhibitors

EXHIBITOR NAME	STAND				
360 Racing	2880	Barkers Awnings	7755	Classic Sports Car Club	7320
3J Driveline Ltd	E880	BB Engineering Supplies	6842	Classic Sports Car Club Ltd	7330
3M United Kingdom	2750	BBS Motorsport GmbH	E395	Classic Team Lotus	6730
600 Racing	7540	BDC Events Ltd	19250	Clean Drive	19530
750 Motor Club Limited	7130	BEN	6251	CNC Heads	8344
A R E Dry Sump Systems	E492	Bennett Built Motorsport	10610	Cobra Exhausts UK	19120
A.R.C. Clothing	6905	Birchills Automotive	6620	Cobra Seats	6645
Abarth	19410	Birmingham City University	7010	Combrake Motorsport	8342
AC Tech GmbH	E740	Bischoff + Scheck AG	6242	Competition Supplies Ltd	E447
Advanced Fuel Systems	E481	BJR Technology Ltd	8216	Complete Kit Car Magazine	19275
Advanced Wear and Safety (1996) Ltd	6120	Blockhead Media	6845	Corbeau & Showtrax (CMC Group)	2200
Adwa Group	7210	Bloodhound SSC	2770	Coys	2270
AEM Performance Electronics	E1041	Bott Ltd	2770B	Coys	2280
AeroCatch	E886	Bowers Group	XE1143	Cristex Ltd	7215
Aerocom Metals Limited	E985	BPG Motorsport	10310	Custom Cages	E1170
Aford Awards	6100	Braille Battery UK	E160	Dan's Motoring Memorabilia/Daz's Models	6835
Aireshetla Plc	6721	Brembo S.p.A.	E140	David Thomas & Graeme Simpson	9002
Akrapovic	2860	Bremsten Technik (UK) Ltd	E980	DC Electronics - Motorsport Specialist Ltd	E181
Alcon Specialist Brakes & Clutches	E1280	Brian James Trailers Limited	2570	Delcam	2770E
Aliant Ultralight Battery	E82	Briggs Automotive Company [BAC] Ltd	19232	Delphi Automotive	8247
ALIVE	19130	BriSCA F1 Stock Cars	10540	Demon Tweaks	6540
All Metal Services	E780	BriSCA F1 Stock Cars	9110	DEN Motorsport	6850
AM Group Redback	E580	BriSCA F2	10190	Development Engineering & Enterprise Ltd	E480
AMRC Training Centre	E1020	Brise Auto-Electrical Systems	E587	Dimensione Sport Srl	8550
Andy Lee Transport Ltd	10620	Britcar	2560	Disc Brakes Australia	7300
Anglesey Circuit	7342	British Historic Kart Club	6101	DMS Technologies Varley Red Top	E86
Anglo American Oil Company Ltd	2500	British Motorsport Marshals Club	7339	Docking Engineering	E760
Ansys	E1190	British Radio Car Association	9260	Dodo Juice	6934
AP Racing	7610	British Rally Marshals Club	6457	Dogcam	6515
Apex Performance Parts	6550	British Superkart Association	6400	Drenth Motorsport Gearboxes	E948
Ariel Motor Company Limited	19340	Brooklands College	8155	Driven Racing Oil	E860
Armadillo Merino	7740	Brown & Geeson Distribution Limited	6610	Drivepast.com - Original Movie Posters	9004
ARP	E670	Brown & Miller Racing Solutions Ltd	E1260	Dunlop MSA BTCC Display	6440
Arrow Precision	E762	BRSCC	7050	Dutton Simulation Ltd	E1030
Art Forty Eight	9001	Bruderer Ltd	E1031	Duxe - Race Ramps	6502
ASNU (UK) Ltd	8455	Brunel University	7115	Dynapack Dynos	E393
AST Suspension	8220	Bruntingthorpe Proving Ground	E444	Dynojet UK	E1261
AT Power	E620	BTB Exhausts Ltd	E1072	E Burgoyne & Sons	10140
Atec Autotechnic Limited	E841	BTN Turbo	7510	Earls Performance Products	E761
Athena - GET	E943	Burton Power	8440	EBC Brakes	8240
ATL Racing Fuel Cells	8405	Camcoat Performance Coatings	E861	EEC Performance Systems	E432
Atom Cup	7270	Caparo AP Braking	7565	EF - Racing Engineering	E346
Aubert & Duval	E484	Capricorn Automotive GmbH	E560	Eibach UK	2600
Aurora Bearing Company	8330	Caracalla 1947	6805	Electrox Laser	E1047
Auto Adrenalin	9230	Carbon Revolution	6575	Elite Motorsport Engineering	19264
Auto Finesse	19000	Cartek Motorsport Electronics	E646	Elite Racing Transmissions	8615
Autocar	19010	CaseLiner	E340	Engine Management Academy Ltd	7200
Autocrew	10630	Caterham Cars Ltd	2540	Engine Parts (UK) Ltd	E18
Autoenhance Ltd	E641	Central Motorway Police Group	9405	EOS - Electro Optical Systems	E942
Automotive Brands Europe	6476	CES Europe Ltd (Pit Equipment)	E830	ETS Racing Fuels	E282
Automotive Engineer	E882	Chaters Booksellers	6800	EVO magazine - Octane magazine	6770
AUTOSPORT	2220	Chevron Cars Ltd	2650	Exact Engineering (Hose & Fittings) Co Ltd	8700
Autosport Bearings and Components	E441	Chris Bayley	9007	Exzess International	E382
Autotel Race Radio	7325	Chrono Sport - Alfano	6131	F1 In Schools	9320
Aviaid Oil Systems	E286	CIMA S.p.A.	E347	F1 Model Helmets	6895
AVL Schrick GmbH	E970	City College Birmingham	7550	F1 Racing	6020
BARC	7430	CKW Distribution	10130	F1 Racing Gear Ltd	6932
		CL Brakes	E342	Ferodo Racing	E1290
		Classic Race Simulators	6720	Ferrea Racing Components	E570
				FEV Motorsport	E584
				FG Motorsport	E844
				Force Racing Wheels Ltd	8708
				Ford Motor Company Ltd	2720
				Ford Racing UK	2760
				Ford RS Owners Club	19640
				Forge Motorsport	8230
				Formula Student IMECHE	E783
				Fox Exhaust	19540
				FRAP Italy - Ball Joints Technologies	E872
				FreeM	6133
				Fuchs Lubricants (UK) PLC	6860
				Fun Cup	7280
				Gary Stead	6840
				GB Enterprises	8205
				GB Motorsport	7020
				Gill Sensors Ltd	E161
				GMR Design	19110
				Go Motorsport	7450
				Go-Kart Party House	9265
				Goldstar Onboard Ltd	8746
				Goodridge Ltd	E262
				Gosnays Engineering Company	E14
				Gran Turismo 6	9210
				Grand Prix Racewear	6220
				Great British Sports Cars	19315
				Greenpower	9310
				Gripper Differentials	E1081
				GRP4 Fabrications	7530
				GST Racing Seals	E40
				GT Cup Championship	6460
				GTMA	E1110
				GTROC	19650
				GWP Protective	E742
				Hamilton Classic	6706
				Happy Racer	6455
				Hard Race	6452
				Haymarket Research Stand	9011
				Haymarket Research Stand	19532
				HB Bearings	E873
				HCD	10640
				Headcaseurope.com	6825
				Hedtec Crash Helmets & Racewear	6600
				HEL Performance	E746
				Henry Surtees Foundation	2672
				Hifi Filter	8711
				Hill Rally & Marches	7150
				HiSpec Motorsport Ltd	8600
				Historic Car Art	9012
				Historic Sports Car Club (HSCC)	6700
				Holinger	E240
				Hortons Books	2920
				HP Elektronik A/S	E930
				icedriving.net	7310
				Image Wheels International Ltd	6665
				Induction Technology Group Ltd	E362
				In-Excess UK Ltd	7640
				Injen Technology	E241
				Intercomp	8300
				Isoclima S.p.A.	E960
				Jenvey Dynamics Ltd	E599
				JG Engineering SW Ltd	10120
				JK - F1 - Grand Prix Shop (Since 1976)	2940
				John Monkman	6909
				JR Motorsports Limited	6565
				JTinnovations Ltd	E84
				Juno Racing Ltd	7230
				K&N Filters	6570
				KA Sensors Ltd	E486
				Kahn Design	19420
				KAPS Transmissions	8201
				Karting Track - Teeside Karting Ltd	Karting Track
				Kawasaki Turbo System Ltd	7752
				Kent Cams	8400
				KFS Special Vehicles	6210
				Kleers Car Care	6465
				Koni	E940
				K-Sport Racing Co Ltd	8305
				Kulite Sensors Ltd	E449
				Kwiktrak (UK) Ltd	6615
				L.A. Sleeve	E585
				Lane Electronics	E640
				Laser Lines Ltd	E586
				Laser Prototypes Europe Ltd	E947
				Lazer Lamps Ltd	8730
				Leather Genie	6926
				Lee Spring Limited	E433
				Lifeline Fire & Safety Systems Ltd	E185
				Light Commercial Models	6956
				Lille Racewear	10240
				Link Engine Management	E180
				Lista (UK) Ltd	7500
				Lotus 7 Club	19630
				Lotus Cars Ltd	2400
				Lotus on Track Racing Drivers Club	19620
				Lotus on Track Racing Drivers Club	7260
				Lucas Oil Products (UK) Ltd	E730
				M.E.RIN Safety Fuel Tanks	E348
				Mac Tools	2460



GRIFFITHS/LAT

A-Z of exhibitors

Maha UK Ltd	E1065	OptimumG	E261	Raceparts UK Ltd	E390	Tekdata Interconnections Limited	E1046
MaxParts/Norma UK	E683	Oracle UK	10250	Raceshirt	6856	The Cool & Groovy Toy Co Ltd	7714
Maxxis International Plc	2250	Oracle UK	6907	Raceworld	6710	The Engine Rebuilder	E16
Mayfair Insurance & Mortgage Consultants Ltd	19440	OSG UK Ltd	E248	Raceworld	6922	The F1 Shop Ltd - Meadowhall	2900
McGard Deutschland GMBH	8640	Owen Developments	7630	Racing Aces	6750	The Firefighters Race Team	9410
McGill Motorsport	10110	Oxford & Cherwell Valley College	7105	RadshapeRC	10330	The IMI - Professional Register	6605
McGill Motorsports	7400	Oxford Brookes University	8150	Rage Motorsport Ltd	19542	The Karting Pavilion	6200
McGill Motorsports Ltd	9041	Pankl Northbridge	E572	Rally Design	8345	The Monogram Group Ltd	6601
Mentor Parts International Company Ltd	8406	Paul Oz - Racing Gold	6253	Rally For Heroes	9430	The Telegraph	6902
Metalweb	E272	Penny & Giles	E770	rallycarsforhire.co.uk	6816	TheMagazineShop.com	2945
MFactory Competition Products	E1071	Performance 247	7340	Rallysport-Development Ltd	6712	Think Automotive Ltd	E270
MIA	8005	Performance Automotive Aftermarket Association	7405	Randall Motorsport	10290	Thyssenkrupp Bilstein Tuning GmbH	2700
Micro Fibre Boxers	19030	Performance Direct	19320	Randall Motorsport	10295	TIGOSE Ltd	E782
Millers Oils	8650	Performance Engine Components	8450	Raw Striker Ltd	19260	Tillett Racing Seats	6510
Millers Oils	E532	Performance French Cars	19330	Raw Striker Ltd	19262	Tilton Engineering Inc.	E548
Mills Extreme Vehicles Ltd	6824	Performance Racing Industry	E581	Redline Racing Developments	10210	Titan	2770A
Milltek Sport Ltd	8540	Perma Grit Alutight	6938	REM Surface Engineering	E941	Titan Motorsport & Automotive Engineering	E1270
Mini Gears (Stockport) Ltd	E80	Peron/Three	19220	Renapur	6616	Titan Motorsports	E360
Minitec	8244	PES Magazine	E920	RetroArtz	19202	Titanium Engineers	E863
Miracle Shamy	6606	PFC Brakes	E660	RetroArtz	6954	TMR Supplies	9031
Mission Motorsport	9130	Piers Dowell	6959	Reverie Ltd	8610	TMR Supplies Ltd	10010
ML Electronics Ltd	E1048	Piper Cams	8605	Revotec Ltd	E284	Top Gear Experience	9010
Modelsupermarket	6822	Pipercross	6760	Richard Grant Mouldings Ltd	E283	Total Seal Piston Rings	E772
Monster Tuning	19350	Pirelli Tyres Ltd	6260	Richbrook Intl Ltd	6660	TotalSim Ltd & Northants Enterprise Partnership	E695
Mosselman Turbo Systems & Lumma Design	19050	Pistal Racing SRL	E961	Rico Rally	19332	Towergate	6500
Motec Europe Ltd	E170	Pitbitz	7710	Rimstock Plc	2640	Towing Homes Ltd	6855
Motor Sports Association	2840	Plays Kool Motorsport	7741	Ringspann (UK) Ltd RCS	E470	TPS Weld Tech Ltd	E643
motorcarpages.com	19400	PMI Europe BV	E684	RM Toys Ltd	10430	Track Driver Magazine	6505
MotorDesign Sweden AB	8740	Polybush	7520	Road Track Race Ltd	19020	Travel Destinations	6640
Motors TV UK	2765	Poorboy's World UK	19230	Robert Bosch Ltd/Blaupunkt	E475	Trident Racing Supplies Ltd	E649
MotorSport	2670	Porsche Cars GB Ltd	2545	Roger Albert Clark Rally	6814	Trident SportsCars Ltd	7562
MotorSport	6928	Porsche Club Great Britain	19560	RTU	E1162	Triple X Trading Ltd	6950
Motorsport Auctions	7750	Porter Press International	6240	Rupes	19201	TRS Motorsport	E642
Motorsport Safety Fund	7335	Powerflex	7545	Sabelt UK & Ireland	E883	TRW Conekt	E343
Motorsport Trailers	9020	Powervamp Ltd	2450	Sadev	8620	TTI Group Ltd	E445
Motorsportclassics.com	9006	Precision Technologies Int. Ltd (P.T.I.)	E249	Samco Sport	7552	TTV Racing Components	E130
M-Sport	2550	Premier Fuel Systems Ltd	E1180	Santa Pod Raceway	8000	Twisted Limited	2641
MX5 Nutz	9180	Prestige Performance Centre	19310	SBD Motorsport	8315	UAB Samsonas Motorsport	7512
Nankang Tyre UK	2620	PRG Trailers	6520	Schroth Racing	6650	Ultimate Hearing Protection	E485
National Autograss Sports Association	10510	Pro Formance Metals Ltd	6405	Second Skin Flying Jackets	6826	Ultra4 Europe	19060
National Autograss Sports Association	9060	Pro Strip	6722	Semip	E1073	Uni-Saf	8340
National College For Motorsport	7100	Pro-Bolt Ltd	E287	Serck Services Motorsport	7250	University of Bolton	2602
Newman Cams	E847	Proto	6820	Serdi (UK) Ltd	E20	University of Bolton	7120
Nexus (GB) Ltd	E1032	Quaife Engineering	8500	Severn Valley Motorsport	19520	University of Bolton	E1062
NGK Spark Plugs (UK) Ltd	2850	Quentor Cases	E731	SFS Performance	8320	University of Central Lancashire	7110
Nicky Grist Motorsports	6470	Race Engine Technology Magazine	E260	Shark Performance	19140	University of Dundee	7102
Nitron Racing Systems Ltd	7525	Race Tech	8618	Shining Monkey	6901	University of Wales Trinity St David	7017
Noble Automotive Ltd	19240	Race Tech	E42	Silicon Hoses.com	E499	V2 Sport	6475
Noble Owners Club	19610	Race Technology	7315	Simpson Performance Products	E1246	VAC Motorsports	E380
Odlings M.C.R. Ltd	E541	Race to the Finish	2910	Smarts 4 You Racing	7660	Vacwash Spares	19606
ODU UK	E842	Race to the Finish	2916	Smiths Metal Centres Ltd	E786	Variohm Eurosensor Ltd	E280
Ohlins Racing AB	7600	Racecar Engineering	E384	Souriau UK Ltd	E748	Vauxhall	2660
Ole Buhl Racing Ltd	E496	Racecar Engineering Magazine	8324	SPA Design	E244	Viper Performance Hoses Ltd	E741
Omex Technology	8555	Racedeck	19351	SPAL Automotive UK Ltd	E530	Viraver Technology SRL	E647
OPEN MIND Technologies AG	E1049	Race-Keeper	7665	Spax Performance Ltd	6630	Vision Plus	10320
Optimax Image Inspection & Measurement Ltd	E398	Racelogic Ltd	7535	Specialty Fasteners & Components Ltd	E887	vision-tek	7216
				Spedeworth Motorsports	10530	VP Racing Fuels Inc	E472
				Spencer Elton	6920	Wagner Tuning	19040
				Sports 2000 Racing Car Club	7232	Wales Rally GB	8435
				SPR	E383	Walker Motorsport	10180
				SS Tube Technology	XE1087	Walkers - Teknofibra UK	E983
				SSAB	E946	Waltham Services	9015
				St. Cross Electronics	E648	Wavetrac Differentials	E1070
				Stand 21 UK	E590	WDS Component Parts Ltd	E1060
				Stemmer Imaging Ltd	2770C	Westwood Cylinder Liners	E862
				Stingray RV Rentals	2780	Willans	E493
				STP	2870	Wiltshire College	8050
				Strongman Tools	7205	Wirth Research Ltd	E520
				Super B	E471	Woodford Trailers	6870
				Super One	6410	WOSP	E391
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EUROPEAN RALLY CHAMPIONSHIP JANNER RALLY (A), JANUARY 3-5 RD 1/12

Kubica snatches Janner Rally glory



Clever tyre choice helped Kubica to win on his M-Sport Fiesta debut

ROBERT KUBICA'S LAST-GASP WIN ON the ERC season-opener (he turned an 11.8-second deficit into a winning margin of 19.9s over the closing 15 miles) could become the stuff of legend, but it was the taking part that really counted for the Pole in the Upper Austrian countryside.

With a 13-round deal to drive a Ford Fiesta World Rally Car in the WRC in the bag, Kubica was keen on some early-season practice for next week's Monte Carlo Rally, where slippery surfaces and changeable conditions will be a major factor.

With ice coating chunks of Saturday's opening trio of stages, Kubica was able to sample driving on studded tyres for the first time

before he was given another crucial Monte lesson: tyre strategy.

Top marks went to local hero Raimund Baumschlager, who was the only leading driver to select winter rather than studded tyres for Saturday's second loop. He demoted Kajetan Kajetanowicz for the lead with the fastest time on stage four. While his Skoda Fabia didn't pack the same punch as turbocharged rivals on the higher-speed stages five and six, where Kajetanowicz and Kubica shared the wins in their turbo Fiestas, 11-time national champ Baumschlager completed the loop out in front only to fall back later when set-up issues took hold.

With Kajetanowicz crashing out

after the throttle pedal on his Fiesta R5 jammed a little more than a mile into stage six, Czech champion Vaclav Pech seized the initiative in his Mini S2000. But he offered little resistance to Kubica, who completed his recovery from a stage-four puncture by winning the day's final three tests to lead overnight.

While Kubica struggled with a minor brake issue on Sunday morning – he hadn't bedded in a new set of pads properly – Pech went fastest three times to hold top spot at mid-morning service in Freistadt. Although Kubica narrowed Pech's advantage on the day's fourth test, the damage had already been done when the 2008 Canadian

Grand Prix winner was handed a 10-second penalty for jumping the start of stage 12. With heavy fog on the next two runs proving a particular menace to the inexperienced Kubica, Pech was in command (to the tune of 11.8s) heading to the final night stage.

Despite heavy rain and a build up of mud over large parts of the course, Pech opted for slicks, while Kubica went for a combination of studded and winter tyres (he'd have preferred winter tyres only but had depleted his allocation). With Pech struggling for grip – and confidence – Kubica shrugged off the worsening conditions to beat his rival by 31.7s, admitting afterwards how close he was to crashing out.

Contact with a wooden post had knocked a light pod askew, which ended up shining the beam straight into his face. As he grappled to find the 'off' switch on an unfamiliar control panel, he failed to hear new co-driver's Maciej Szczepaniak's instructions for a corner and charged through a field, albeit with minimal delay and damage.

● Graham Lister

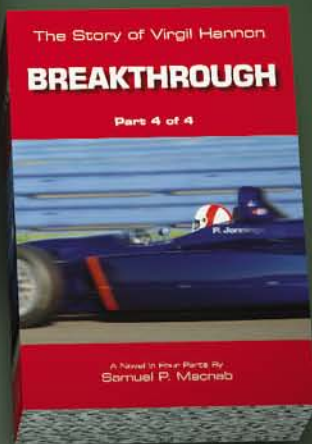


Pech's Mini led into the final stage but missed out

RESULTS

1 Robert Kubica/Maciej Szczepaniak (Ford Fiesta RRC), 18 stages in 2h47m06.9s; 2 Vaclav Pech/Petr Uhel (Mini JCW S2000) +19.9s; 3 Raimund Baumschlager/Klaus Wicha (Skoda Fabia S2000); 4 Beppo Harrach/Leopold Welsersheimb (Mitsubishi Lancer Evolution IX R4); 5 Jaromir Tarabus/Daniel Trunkat (Skoda Fabia S2000); 6 Andreas Aigner/Barbara Watzl (Peugeot 207 S2000).
Points 1 Kubica, 39; 2 Pech, 30; 3 Baumschlager, 24; 4 Harrach, 20; 5 Tarabus, 17; 6 Aigner, 12.

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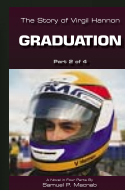
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DAKAR RALLY ROSARIO-SAN RAFAEL (RA), JAN 5-6 STAGES 1-2

Peterhansel on top as Dakar kicks off

STEPHANE PETERHANSEL AND JEAN-PAUL COTTRET began their bid for a hat-trick by taking a 28-second lead after two stages of the 36th Dakar Rally, held in searing heat in north-west Argentina.

Monster Energy X-raid director Sven Quandt has entered a 12-car sledgehammer of a team to enable the BMW-owned squad to crack the proverbial Dakar nut, and it was little surprise that four Mini All4 Racings graced the unofficial top five heading towards San Juan on Tuesday.

Peterhansel's stage win between San Luis and San Rafael lifted the Frenchman from sixth to top spot, although an impressive run by 2010 winner Carlos Sainz was sufficient for the Spaniard to climb to second on his first outing in an SMG Buggy.

Qatar's Nasser Al-Attiyah lost ground on the leading duo, but the 2011 winner headed Mini team-mate Joan Roma by nine seconds to control third spot. Argentinian Orlando Terranova was fifth in another Mini.

Portugal's Carlos Sousa was the surprise leader after the opening 110-mile stage between Rosario and

San Luis. The Haval H8 driver took an 11s lead into day two, which finished with an 18-mile passage through the treacherous volcanic dunes of Nihuil. A broken turbo 20 miles into the second test cost him.

"It was very tough," said Sousa, who gave the Chinese manufacturer its first Dakar stage win. "Our car doesn't have air conditioning and all the air inlets were clogged. The turbo air inlet broke and sent the air from the engine directly towards me. It must have been 70C inside the car and we had trouble breathing. We suffered like dogs to earn the win."

Team Ford Racing and the eight-strong fleet of Toyota Hiluxes made disappointing starts. The throttle body failed on Lucio Alvarez's Ford Ranger; he lost over two hours and slipped as far as 130th overall before moving back to 38th into San Rafael.

Team-mate Chris Visser reached San Luis in 141st position after the wheelnuts sheared off the front-right hub of his Ranger and the South African had to wait for the assistance truck. He was hospitalised with a neck injury after a heavy roll in



Peterhansel's bid for a 12th Dakar win has started well

the Nihuil dunes on the next stage.

Last year's runner-up and 2009 winner Giniel de Villiers was also in the wars, and power-steering issues dogged his Toyota Hilux. He slipped to 27th with the loss of 12 minutes after leg one, but went third quickest on SS2 to climb to sixth. "It was the drive from hell for me," he said. "My arms are absolutely exhausted."

Robby Gordon was 133rd after SS1, after his Hummer overheated, but he recovered to 54th overall after SS2.

● Neil Perkins

POSITIONS AFTER STAGE 2

1 Stéphane Peterhansel/Jean-Paul Cottret (Mini All4 Racing), 6h17m02s; **2** Carlos Sainz/Timo Gottschalk (SMG Buggy), +28s; **3** Nasser Al-Attiyah/Lucas Cruz (Mini All4 Racing); **4** Joan Roma/Michel Perin (Mini All4 Racing); **5** Orlando Terranova/Paulo Fiuza (Mini All4 Racing); **6** Giniel de Villiers/Dirk von Zitzewitz (Toyota Hilux); **7** Christian Lavieille/Jean-Pierre Garcin (Haval H8); **8** Reinaldo Marques Varela/Gustavo Gugelmin (Mitsubishi ASX); **9** Krzysztof Holowczyc/Konstantin Zhiltsov (Mini All4 Racing); **10** Marek Dabrowski/Jacek Czachor (Toyota Hilux).

MRF CHALLENGE SAKHIR (BRN), DECEMBER 20-21 RD 3/4

Ellinas takes charge with MRF double

GP3 ACE TIO ELLINAS GRABBED THE lead of the MRF Challenge by winning twice in four races as the series returned to Bahrain before Christmas for its penultimate round.

Marussia-affiliated driver Ellinas shared the top step of the podium with British racer Rupert Svendsen-Cook, who kept himself in title contention by winning the other two races held at the Sakhir circuit.

Ex-British F3 racer Svendsen-Cook, who does development driving for MRF, beat poleman Ellinas away to win race one. The Cypriot stayed close in the early stages, but couldn't retake the lead and later came under pressure from erstwhile points leader Arthur Pic.

The pair traded places in the closing stages, allowing Svendsen-Cook to pull away and record his third win of the series, while Ellinas got the best of Pic to reclaim second.

Svendsen-Cook made a brilliant start from the partially-reversed grid to climb from sixth to second in race two, behind poleman Shinya Michimi. Svendsen-Cook grabbed the lead from the Japanese, who then collided with his rival attempting to wrestle it back.

This handed victory to the lurking Ellinas, while Pic rose to second as



Winners Ellinas (left) and Svendsen-Cook (21) fight

Svendsen-Cook retired and Michimi took a 30-second penalty.

Ellinas won again in race three, pouncing on a mistake by poleman Svendsen-Cook coming out on the main straight early on. Svendsen-Cook later came under pressure from Pic, but resisted the Frenchman's attentions to keep second.

Michimi again started on reversed-grid pole for the finale, but it took only five laps for Svendsen-Cook to climb from row three to lead. He

went on to claim his second win of the weekend as a drive-through penalty for a jumped start ruined Ellinas's race, while Pic retired after a collision with Renan Guerra.

European F3 race winner Harry Tinncknell scored two fourths and a fifth from the four races, while Ryan Cullen twice cracked the top six.

RESULTS

Race 1 1 Rupert Svendsen-Cook, 15 laps in 22m37.854s; 2 Tio Ellinas, +0.658s; 3 Arthur

Pic; 4 Renan Guerra; 5 Sam Dejonghe; 6 Shinya Michimi. **Race 2** 1 Ellinas, 12 laps in 19m51.348s; 2 Pic, +2.009s; 3 Dejonghe; 4 Guerra; 5 Harry Tinncknell; 6 Ryan Cullen. **Race 3** 1 Ellinas, 15 laps in 21m07.639s; 2 Svendsen-Cook, +2.831s; 3 Pic; 4 Tinncknell; 5 Dejonghe; 6 Michimi. **Race 4** 1 Svendsen-Cook, 15 laps in 21m15.025s; 2 Michimi, +6.962s; 3 Dejonghe; 4 Tinncknell; 5 Ryan Cullen; 6 Camren Kaminsky. **Points** 1 Ellinas, 150; 2 Pic, 134; 3 Svendsen-Cook, 128; 4 Dejonghe, 83; 5 Michimi, 62; 6 Tinncknell, 55.

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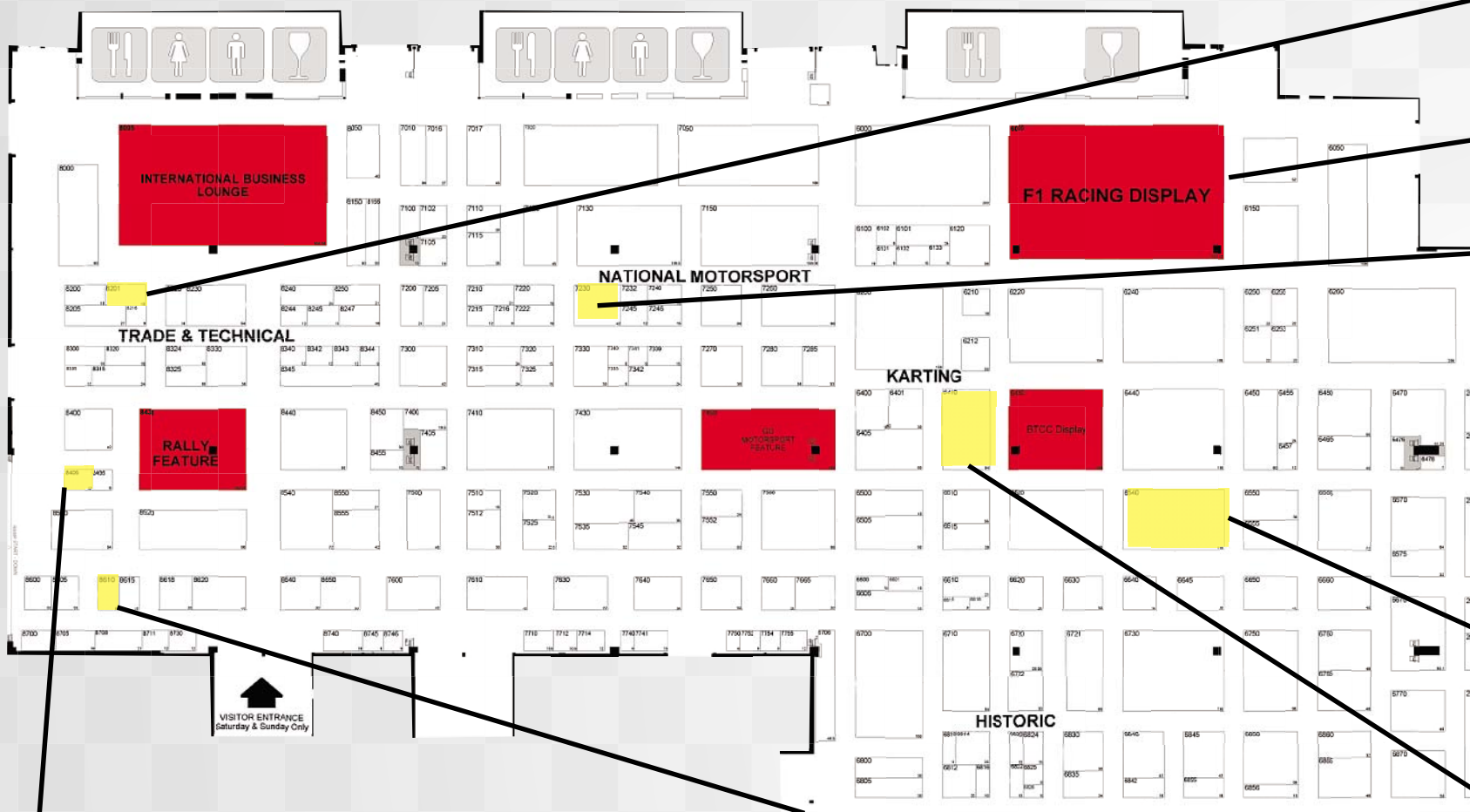
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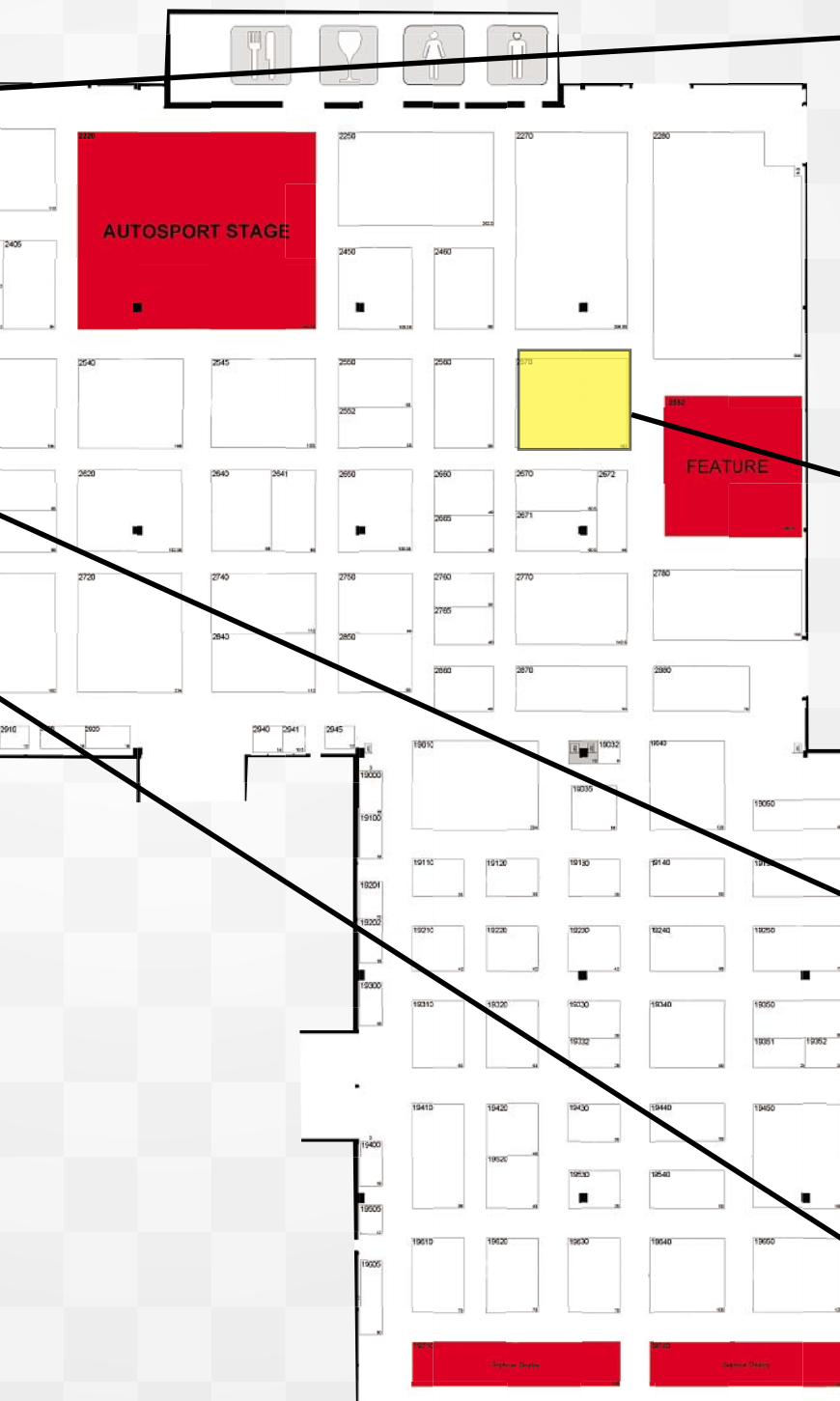
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Due to recent growth we are now looking for an Events/Race Administrator to join the team on a full time basis to support the management of these activities, with particular responsibility for race entry administration for the AMOC Racing programme. As part of our expansion we are also relocating the office to the newly opened Bicester Heritage business park, located on the site of the former RAF Bicester airfield, now an exciting development dedicated to historic motoring and aviation.

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KX Akademy drivers revealed

Five racers to join young driver programme in three series for 2014



Tordoff will again race with KX mentor Plato in MG BTCC team

ALL PICS: EBREV/LAT

BEN ANDERSON
NATIONAL EDITOR

ben.anderson@haymarket.com

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IT'S PROBABLY FAIR TO SAY

that British motorsport is better off since the KX Akademy brought its own brand of energy-drink-fuelled backing onto the TOCA support package.

In its first full season, the scheme helped put Porsche racer Sam Tordoff into the BTCC, aided Tom Ingram in taking his third Ginetta title in four seasons, handed Stefan Hodgetts a career lifeline, and allowed Ant Whorton-Eales, Daniel Lloyd and Rob Boston to continue/get to a level of racing they might otherwise not have reached.

For Boston, Hodgetts and Lloyd (Ginetta Supercup champion Tom Ingram has decided to go his own way in joining the BTCC), being dropped by the scheme for this season is the final harsh lesson in how ruthless professional sport can be if you don't deliver the right results.

No scheme is perfect, and when money is involved there's always a lot of pressure on the decision making involved. But the large numbers of applications received for the first two editions of the project prove KX has found a marketing niche by reaching out to drivers who aren't trying to chase impossible F1 dreams.

That the HSCC's fledgling Super Touring Trophy initiative has secured a BTCC-support slot for this summer's Oulton Park meeting is a dream come true for series prime mover Johnny Westbrook (see page 96).

I believe the BTCC needs more variety in its support race programme, and evocative examples of the British Touring Car Championship's 'golden era' will give touring car fans an extra reason to travel to Cheshire for what is already one of the most popular events of the season.

THE KX AKADEMY HAS CHOSEN

five drivers it will assist this season.

Two of last year's Akademy members – Sam Tordoff and Ant Whorton-Eales – remain and will be joined by Renault Clio Cup UK racers Alex Morgan and Ash Hand, and David Pittard, who steps up from the Ginetta GT5 Challenge to the GT4 Supercup.

The KX Akademy, launched in 2012, aims to assist young British driving talent in touring cars and sportscars. As well as providing funds, the scheme includes sponsorship and media training, with British Touring Car star Jason Plato acting as mentor.

Hand, Morgan and Whorton-Eales will all contest the Clio Cup with SVR Racing, while Pittard also joins SVR for his first season in a Ginetta G55. Tordoff, who took his first BTCC victory last year, stays at the Triple Eight MG squad alongside Plato.

The initiative supported six drivers full time in 2013, with Tom Ingram winning the GT Supercup title. He has graduated from the Akademy as he targets the BTCC outside the KX-backed Triple Eight operation.

THE CHOSEN FIVE

Why these drivers were chosen by KX



Sam Tordoff Age 24
BTCC with Triple Eight

Tordoff impressed during his rookie BTCC campaign, taking a win at Snetterton. He will be expected to assist the junior Akademy members.



David Pittard Age 21
GT4 Supercup with SVR

Narrowly missed out in 2013 and stayed in contact with KX throughout the year. Has also been fast in everything he has driven.



Alex Morgan Age 26
Clio Cup with SVR

Impressive return to racing in 2013 and has showed plenty of passion and enthusiasm for the sport away from the circuit.



Ash Hand Age 19
Clio Cup with SVR

Probably the least experienced of the members, but has shown promise and was strong at the interview stage of the process.



Ant Whorton-Eales
Age 19 Clio Cup with SVR

Had a difficult start to 2013, but was much stronger later on and has been given the chance to go for the title in the new Clio Cup racer.

RACE WINNERS WITH KX

Tom Ingram (2012* & 2013)	13
Stefan Hodgetts (2012* & 2013)	6
Rob Boston (2013)	2
Sam Tordoff (2013)	1
Daniel Lloyd (2013)	1
Ant Whorton-Eales (2013)	1

*From Snetterton rounds onwards

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Super Touring cars will guest at BTCC on series' return to Oulton's International layout

Super Touring

Super Touring joins Oulton BTCC bill

SUPER TOURING CARS WILL support the British Touring Car Championship at its Oulton Park round this season.

The Historic Sports Car Club-run Super Touring Trophy was launched in 2013, primarily for tin-tops of the 1970-2000 period. Four events had already been announced for 2014 (see AUTOSPORT, November 14 2013) and now a fifth has been added for the

June 7-8 BTCC meeting on Oulton's International circuit.

The plan is for two races to be run, of around 20 minutes' duration, with one televised on ITV4. Rolling starts will be used.

Series founder Jonny Westbrook told AUTOSPORT: "Not only are we with one of the best racing clubs in the country with the HSCC, we're now on the BTCC package. All credit

to [BTCC boss] Alan Gow and [HSCC director] Grahame White for making this happen.

"It's on the long circuit, which is great in Super Touring terms because there were some superb races there back in the day.

"The fanbase in the BTCC now has its roots in the Super Touring era [1991-2000]. It's incredible we've got the opportunity to be able

to race in front of them again."

Former BTCC champion Tim Harvey, who appeared in the series last year in a Ford Sierra Cosworth RS500, is hoping to contest the event.

"If there was a car I would do it," he told AUTOSPORT. "I really want to be in that race. I do know people with cars, but I expect they will want to race at that event themselves! There's a good chance [I'll do it]."

Ginetta GT Supercup

Woodhead joins Douglas for Ginetta GT Supercup campaign

GINETTA JUNIOR CHAMPION

Harry Woodhead has joined Douglas Motorsport for his GT Supercup move.

Woodhead, who dominated the British manufacturer's junior category last season, had targeted a Supercup campaign after testing a G55 for the first time at Silverstone at the end of last year (see AUTOSPORT, December 12).

The 16-year-old wants to emulate ex-Junior champion Tom Ingram – who challenged for the Supercup title in his first season in 2012 and landed the crown a year later – in becoming a frontrunner from the start.

"Having raced in juniors over the last two years, the team certainly knows how to give their drivers a race-winning car," said Woodhead, who was run by



Douglas during the Silverstone test.

Team principal Wayne Douglas added: "Harry was a class act last season. His pace in the test proved this step up is certainly not a challenge too far for him."

● The top two in the 2014 Ginetta Junior Scholarship have signed deals to race in the series. Winner Alex Sedgwick will race for JHR, while runner-up Matt Chapman will drive for the TCR squad.

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Entrants will participate in a test day in February, where a judging panel including British Touring Car race winner Tom Onslow-Cole will assess them.

Milltek managing director Steve Pound said: "We will provide the car,

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British GT

Ferrier eyes British GT with pair of Astons after setting up own team

EX-BRITISH TOURING CAR DRIVER

Tom Ferrier has set up his own race team and wants to run two Aston Martins in British GT next season.

The team, branded TF Sport, will run Paul Bailey and Andy Schulz in their regular Aston Martin Vantage GT3 in BGT, plus selected races such as Blancpain and the Dutch Supercar Challenge, under the Horsepower Racing banner.

Ferrier is also keen to run a 2014-spec Vantage in BGT and other GT3 races.

Ferrier has split with long-time partners Danny Buxton and Piers Masarati, with whom he had run Horsepower's Aston under the trio's Scuderia Vittoria moniker.

Masarati is now business development manager with Gulf Racing – which also has plans to enter BGT with a McLaren (see AUTOSPORT, December 19-26) – while Buxton has become sole operator of the original team, now SV Racing, and will run cars in the Clio Cup UK.

Ferrier, who partnered Bailey and Schulz in the 2013 Britcar Six Hours at Silverstone, said the Vantage was the best place for the team to start its GT programme but was open to other potential deals in the future.

"I know what a great car the GT3 Aston is having raced it myself and I am looking for a good pairing for the second car," he said. "Having had a year's experience racing this car we are confident that results will continue to come our way."



Ferrier will run HPR Aston in British GT

Clio Cup UK

Colburn, Westbourne commit as new-look Clio Cup grid swells

RENAULT CLIO CUP UK RACE

winner James Colburn will return to the series in 2014 after his Westbourne Motorsport team brought the provisional grid of new cars up to 16 entries.

Colburn claimed two victories on his way to fourth overall last season and will stick with his family-run team for the new turbocharged Clio's debut year in the UK.

Westbourne's confirmation means each of the top four teams will be represented by at least one car this season. Last year's winning squad Team Pyro boasts the biggest fleet, adding three new Clios to the two it ran in Europe in 2013, with another to be collected as its Eurocup title prize.

SV Racing, formerly Scuderia Vittoria, has bought two cars – with at least one

more expected to join the fold to complete its KX Akademy line-up – while JHR and Total Control Racing have each taken delivery of one.

Three more have been sold to 20Ten Racing, while Lee Pattison, Finlay Crocker and Daniel Rowbottom have each independently bought cars.



New Clio grid should be close to 20 cars

Citroen 2CV

2CV 24 Hours switches from Snetterton to Anglesey for 2014

THE 2CV 24 HOURS WILL END A

10-season run at Snetterton and move to Welsh venue Anglesey for 2014.

The event ran for many years at Mondello Park in Ireland before moving to Snetterton. But now the Classic 2CV Racing Club, in cooperation with the

BARC, has negotiated a new deal to take the feature event in the 2CV championship to Wales on August 30-31.

Classic 2CV Racing Club chairman Mervyn Rundle: "Our members have enjoyed some great racing at Snetterton but the invitation to race on the twisty and challenging Anglesey circuit was very attractive."

Anglesey circuit boss Chris Bibb added: "Club motorsport should surely be all about fun and camaraderie – and by that measure the annual 2CV 24 Hour race is as good as it gets."

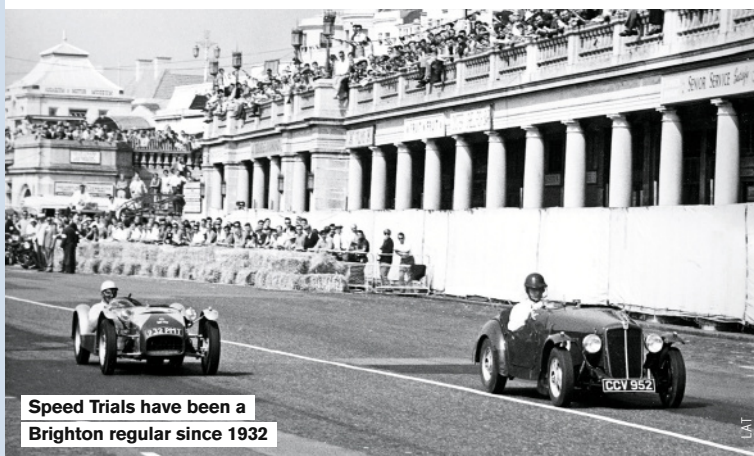
"With the 2CV GB meet and the other Citroen clubs joining in, we'll have a great crowd and lots of off-track activities to make for a special atmosphere."



2CV race is heading to Welsh coast

HUMBLE PYE

The voice of club racing



Speed Trials have been a Brighton regular since 1932

Fans must rally to protect Brighton's century-old event

The future of the Brighton Speed Trials, one of Great Britain's longest-established and most popular motorsport events – and part of the south coast resort's fabric since 1905 – is in grave jeopardy. Brighton and Hove City Council (BHCC) will effectively decide the seafront sprint's fate at a meeting on January 23, although it is beholden upon the Green Party-led administration to consider the views of an uprising that is rallying against it in a bid to earn a reprieve for the September institution.

As AUTOSPORT closed for press, almost 10,000 people had signed an e-petition to save the speed trials, which Brighton and Hove Motor Club's PR officer Ruth Reynolds launched on the BHCC website on December 19.

"Interest in the petition has exceeded expectations," said Reynolds. "It has certainly got the council's attention. Overwhelming support has led to coverage on the local news and even in national newspapers. People are also lobbying councillors on Twitter and Facebook has been very active too."

BHMC, which founded the speed trials for pioneer motorists of the Edwardian era, ran two more events in the 1920s before establishing it as an annual attraction in '32. Since '93, the standing-start dash has been promoted over a shortened quarter-mile course on Madeira Drive (a public thoroughfare closed

for the day) under the strict jurisdiction of permits issued by the Motor Sports Association and Auto Cycle Union, UK governing bodies for car and motorcycle sport respectively.

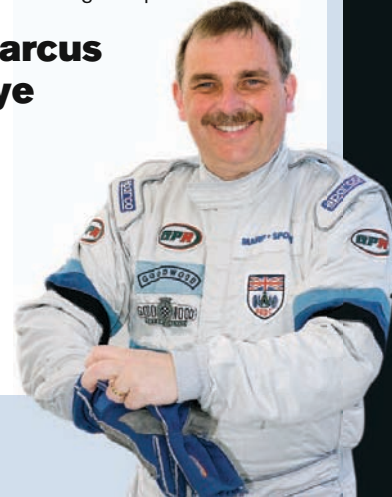
Delays with the inquest into the death of motorcycle sidecar competitor Charlotte Tagg (the coroner recorded a verdict of accidental death) at the 2012 event precluded BHMC from staging the Speed Trials last year. It was only the second time since 1946, when competition resumed post-World War Two, that the event was not run, foot-and-mouth disease having forced its cancellation in '69.

Townsmen Tony Johnstone, who has officiated at every Brighton Speed Trials since 1960, as clerk of the course since '84, and chaired the BHMC since '85, is delighted at the groundswell of support for the event but remains pessimistic.

"We are doing everything possible to run an event in 2014," he said. "The Conservatives [on the council] are with us, but the Green Party does not appear interested in Brighton, let alone the speed trials, which bring many benefits to the town with minimal disruption."

You can sign the e-petition at www.savebrightonspeedtrials.com.

Marcus Pye



"The Brighton Speed Trials are part of the south coast's fabric but officials have become pessimistic"



UNDEFEATABLE!

Dan Cammish knew only the title would do when he rejoined British Formula Ford for 2013 but he never dreamed he'd win more races than any driver in the British Isles. By **SCOTT MITCHELL**

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Evaluating a pool of drivers racing different cars in different championships is always a difficult task, not least when the pool in question spans the length and breadth of the British Isles.

The AUTOSPORT Golden Helmet simplifies this by rewarding the driver with the most wins, and in the case of 2013 the victories (24, to be precise) of Dan Cammish made it even simpler.

A remarkable sequence of performances from the British Formula Ford champion meant he ended the year unbeaten. But while the crushing manner of his success was sometimes surprising, ultimately the end result was not.

Cammish was comfortably the most experienced driver in the field, and was rejoining a series in which he made his car-racing debut back in 2009. He was already a proven race winner, having taken victory twice on his way to third in the points in 2010, and his return to the Ford fold three years later was by force rather than desire.

"I took a backwards step to rebuild what is left of my career," is his frank assessment of the decision,

which was the result of lost career momentum. Having finished sixth in a competitive FRenault UK field in 2011 (despite missing the opening six races) he thrashed out a late deal to make his FRenault Eurocup debut in the 2012 championship opener. But a huge crash left him with a broken pelvis, and he spent the remainder of the season sidelined.

Cammish evaluated his options, and decided going for the FFord title on the TOCA package with the crack JTR squad would be the best way to boost his profile again. The decision paid off handsomely, and he became champion with two rounds to spare.

The nature of his dominance generated some inevitable question marks over the strength of the grid, which struggled for numbers on its return to the TOCA support package, but the 24-year-old insists the competition was up to scratch.

Nonetheless, confirming his title at Rockingham effectively removed his sole motivation from a season almost completely devoid of challenge. Cammish feels his performances were no longer working in his favour – relentless domination is often a motorsport turn-off – and he neglected to



Cammish stood on the top step 24 times CHAMPIONSHIP OF GREAT BRITAIN



Cammish began career in Formula Ford in '09

contest the final two rounds, instead focusing on his prize end-of-year test with British Touring Car team Motorbase in an NGTC Ford Focus.

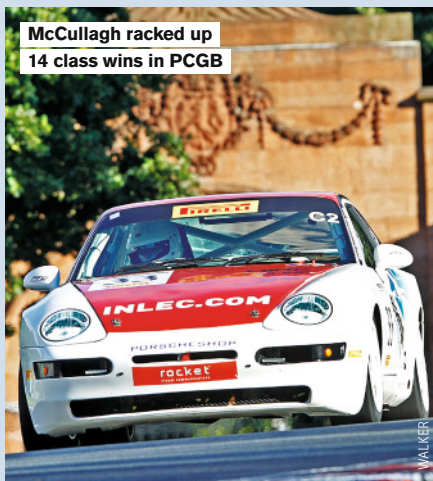
"At times we were in a different class," reflects Cammish, who is openly seeking a BTCC deal for 2014. "We took a decision not to continue because it [winning] started to go against me in a big way.

"I wasn't enjoying it as much at the end. Ford was desperate to see me back, but by the end of the year I think they were glad to see the back of me!"

Cammish's efforts were such that Golden Helmet runner-up, Legends champion Dean Brace, amassed 'only' two-thirds of his victories with 16 wins, while 2012 winner Tom Roche – despite continuing his domination of MX5 racing with 14 BRSCC wins – slipped to sixth in the 2013 table.

Ginetta GT Supercup champion Tom Ingram just missed out on the top 10, but would have been no higher than 20th if not for two victories during a guest MG Trophy drive boosting his tally. Much further back is his KX Akademy mentor Jason Plato, the leading BTCC representative, who won eight times to slot into 60th. Champion Andrew Jordan fails to crack the top 100 with his six wins.

Ten wins in six different cars make Simon Hadfield, in 38th, the most versatile driver in the list, while a quartet of Chevrons and a Jaguar E-Type powered Martin O'Connell to eight wins and 75th in our final list of race winners.



McCullagh racked up 14 class wins in PCGB



Hadfield (here in a Lotus 47) won in six different cars



Radical racer Lewis Plato was top sportscar winner



TOP 100

The list is compiled with the following provisos: no handicap, repechage or consolation races; all races must be scheduled to run for a minimum of 10 miles; overall and class wins only count when there is a minimum of six starters. Overall wins take precedence over class victories, and where there's a tie on wins we separate them depending on average grid size. Compiled by MARCUS SIMMONS

POS	DRIVER	CAR/CARS	O/ALL	CL	TOT
1	Dan Cammish	Mygale M13-SJ	24	0	24
2	Dean Brace	Ford Coupe	16	0	16
3	Lewis Plato	Radical SR3	8	8	16
4	Garrie Whittaker	BMW E36 M3	15	0	15
5	Tom Bradshaw	Porsche Boxster/Van Diemen RF92/Gibson CN 2012	13	2	15
6	Tom Roche	Mazda MX5 Mk1	14	0	14
7	Richard Styrin	Porsche Boxster	14	0	14
8	John Mickel	Coupe 1934	14	0	14
9	John McCullagh	Porsche 968 CS	0	14	14
10	Stuart Pearson	Ginetta G20	0	14	14
11	Tom Ingram	Ginetta G55/MG ZR 190	13	0	13
12	Bradley Smith	Radical SR3	13	0	13
13	Aiden Moffat	Ford Fiesta ST/Mini Cooper	12	1	13
14	Alan Kirkaldy	BMW Compact 318Ti	6	7	13
15	Steve Roberts	BMW Compact 318Ti	12	0	12
16	Guy Wenham	Citroen Saxo VTR	12	0	12
17	Simon Allaway	Lotus Esprit Daytona V8	10	2	12
18	Matthew Palmer	Toyota MR2 Mk2	8	4	12
19	Shane Stoney	Mini Cooper	1	11	12
20	Nelson Rowe	Reynard SF79/Crossle 20F	11	0	11
21	Paul Sibley	MG Midget/Lotus Elan	11	0	11
22	Connaire Finn	Ginetta G50	11	0	11
23	Harry Woodhead	Ginetta G40	11	0	11
24	Jonathan Lewis	Mighty Mini/Van Diemen	9	2	11
25	Jesper Westerholm	Radical PR6	8	3	11
26	Richard Hockley	Honda Civic EK	7	4	11
27	Paul Corbridge	Toyota MR2 Mk1	4	7	11
28	Jamie Jardine	Reynard B4FF	4	7	11
29	Chris Whiteman	Honda Civic Type R	4	7	11
30	Wayne MacCauley	Ford Fiesta XR2	0	11	11
31	Leo Voyazides	Lotus Cortina/Lola T70 Mk3B/Ford Falcon/AC Cobra	10	0	10
32	Rod Birley	Ford Escort WRC	10	0	10
33	Erik Holstein	BMW M3	10	0	10
34	David Abbott	Ford Fiesta Zetec S	10	0	10
35	JJ Ross	Ford Fiesta ST	10	0	10
36	Rob Spencer	MGB GTV8/Bugatti Type 35B	9	1	10
37	Alan Watkins	Sylva Stryker	9	1	10
38	Simon Hadfield	Lotus Cortina/Lola T70 Mk3B/AC Cobra/Aston Martin DB3S/Lotus 47/Aston Martin Project 214	8	2	10
39	Dylan Stanley	Caterham Super Graduate	8	2	10
40	Adam Gore	Lotus Elise S2	6	4	10
41	George Wright	Porsche 944 S2/Porsche 993 C4	1	9	10
42	Jim Baynam	MGB Roadster	0	10	10
43	Paul Smith	AHS Dominator	9	0	9
44	Michael Lyons	Lola T400/Williams FW07	9	0	9
45	Tim Hood	TVR Sagaris	9	0	9
46	David Chapman	Mazda MX-5 Mk3	9	0	9
47	Lee Morgan	Jedi Mk6	9	0	9
48	David Kelly	Crossle 9S	9	0	9
49	Matthew Higginson	Spire GT3	8	1	9
50	Aaron Pullan	Toyota MR2 Mk1	8	1	9

POS	DRIVER	CAR/CARS	O/ALL	CL	TOT
51	Brian Arculus	Lotus Elite/Hillman Minx	4	5	9
52	Will di Claudio	Peugeot 106 GTi	3	6	9
53	Robert Ballard	SEAT Leon Cupra 20v Turbo	3	6	9
54	Thomas Barclay	Jaguar XJ6 Coupe	2	7	9
55	Alastair Kirkham	Porsche 924	0	9	9
56	Thomas Grainger	Rover 100 GTi	0	9	9
57	Matthew Fielding	BMW E36 M3	0	9	9
58	Aaron Mason	Volkswagen Scirocco R/Volkswagen Golf GTI Mk5	8	0	8
59	Jeremy Webb	Caterham Sigmax Graduate	8	0	8
60	Jason Plato	MG6	8	0	8
61	Ian Jones	Lotus 59	8	0	8
62	Mike Gardner	Van Diemen RF80	8	0	8
63	Mark Charteris	Mallock U2 Mk20/21	8	0	8
64	Michael Gazda	Caterham Tracksport	8	0	8
65	Bill Addison	Caterham Superlight R400	8	0	8
66	Adam Macauley	Sheane FV01/GAC	8	0	8
67	Michael Meadows	Porsche 997 GT3 Cup	8	0	8
68	Robert Burkinshaw	Honda Integra Type R	8	0	8
69	Dylan Curley	Ginetta G20 Coupe	8	0	8
70	Jamie Ellwood	Caterham Mega Graduate	7	1	8
71	Matt Simpson	Vauxhall Tigra	7	1	8
72	James Dodd	Chevron B31/Honda Accord/Nissan Primera	7	1	8
73	Tim Scott Andrews	Rover Vitesse	7	1	8
74	Andrew Morrison	SEAT Leon Cupra	6	2	8
75	Martin O'Connell	Chevron B8/Chevron B19/Chevron B36/Chevron B40/Jaguar E-type	6	2	8
76	Chris Hodgen	Van Diemen RF89	6	2	8
77	Graham Smith	Caterham Classic Graduate	5	3	8
78	Simon Cripps	MGB Roadster/MGB GTV8	4	4	8
79	Nick Fleming	Lotus Elan S1/Chevron B36/Chevron B8/Ralt RT1	4	4	8
80	Jason Timms	Speads RM07	3	5	8
81	Alan Davidson	GMS/Westfield Honda	2	6	8
82	Dean Cook	TVR Tuscan	1	7	8
83	Alex Champkin	Vision V84	1	7	8
84	Paul Curtis	Mazda MX5 Mk1	1	7	8
85	James Dowding	Volkswagen Golf GTI Mk4	0	8	8
86	Amanda Black	Caterham Sigma Graduate	0	8	8
87	David Howard	Jaguar XJ12	7	0	7
88	Kenneth Thirlwall	Mini Cooper	7	0	7
89	Joe Tanner	Mini Cooper	7	0	7
90	David Sleight	Mini Cooper	7	0	7
91	Colin Noble Jr	Radical SR1	7	0	7
92	Oliver Ford	Lotus Europa	7	0	7
93	Robbie Watts	Lola F106/03	7	0	7
94	Ivor McCullough	Van Diemen RF00	7	0	7
95	Pascal Green	Caterham C400	7	0	7
96	Ray Moore	Leystone JH004	7	0	7
97	Tommy Gilmartin	Morgan Plus 8	7	0	7
98	Callum Grant	Merlyn Mk20A/Delta T78	6	1	7
99	Matt Parkes	BMW E30 320i	5	2	7
100	Russell McCarthy	MGB GTV8	5	2	7

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THIS WEEK

LETTERS • BEST PICS • LATEST GEAR • ON TRACK & SCREEN • ONLINE

What you think of the motorsport news of the past week



Here's an idea: give F1 minnows a bigger slice of the cake

Let all benefit from F1's loot

Since this seems to be the season for crazy ideas in F1, I wish to share one with you.

I have long felt the funding/prize-money structure in F1 is completely wrong. It's obvious the teams that need the biggest share of the pot are those at the back of the grid, so instead of giving the biggest chunk to Ferrari (because of their legacy) and then the best performing teams (Red Bull, Mercedes, McLaren, etc) I would propose either giving all teams an equal share or

reversing the payouts so Marussia and Caterham get a good budget so they can up their game.

After all, the top teams will always attract the biggest sponsors; and they could not compete if the midfield and back-of-the-grid teams were not also taking part.

This system of sharing out the revenues might attract new entrants and give a good foundation from which to get established.

Andrew Beint, Chippenham

You have to admire Robert Kubica for getting a top drive with M-Sport in the WRC.

After his accident and difficult recovery, he has never made any wild predictions about what he'd do, but has worked tirelessly at getting back to be as fit as possible and worked out what he would be competitive at considering the long-term effects of his injuries.

I think he'll be a great addition and F1's loss is the WRC's gain, albeit in unfortunate circumstances.

Andy Maclean Churchill, Oxon

If you want to make F1 more interesting, bring in durable practice tyres and ultra-quick sprint qualifying tyres. Then have a 15-minute warm-up

session with the race tyres before the race. We all saw what happened in Brazil when they had no data on the race tyres – it was chaos, which meant only the very best drivers could get points.

Also, let the bottom eight teams have in-season testing to level the playing field.
Geed Yates (age 12) By email

The ruckus over double points

for the last F1 race surprises me, though I do admire the brilliant PR impact it's achieved.

Two issues not yet addressed well: first, F1 has a tradition of giving more points for drivers' best races by only counting the best results from the season, so double points for the last race at least impacts all drivers the same.

Second, races at end of season (unless they change the rules, like new-spec tyres...) certainly are more competitive, as car set-up and reliability is much better than at the beginning of the season.

Old Bernie's double-points idea surely has merit because of more competitive end-of-season races.
Johnnie Crean Kamuela, Hawaii

CORRECTION

We incorrectly identified Jim Timms instead of Dean Forward as the HSCC Historic Formula 3 victor in our round-up of national champions (December 19-29). Some of Kirkistown's champions were also listed erroneously; see www.kirkistown.com for the 2013 results.

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In pictures

Our snappers roaming the globe from the Austrian Alps to the US of A



OUR FIRST WINNER OF 2014!
Robert Kubica won last weekend's Janner Rally after a fantastic late charge in his M-Sport Fiesta – urged on here by a low-flying chopper

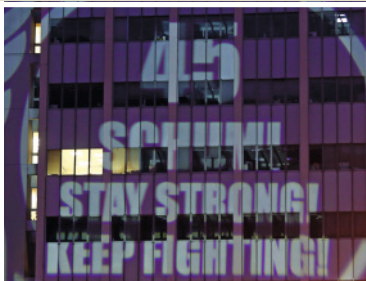
BAUDIN/DPPI



DAYTONA: THE SPEED OF NIGHT
The HPD ARX-03b of Ed Brown, Johannes van Overbeek, Simon Pagenaud and Anthony Lazzaro cuts a colourful swathe through the Florida night in Daytona 24 testing

LEVITTI/LAT

FANS' MESSAGE FOR SCHUEY
As he recovers after his skiing accident, Michael Schumacher's fans beamed this message onto the wall of his hospital to mark his 45th birthday



GRIMM/BONGARTS/GETTY

QUIET MORNING ON THE STRIP
Las Vegas isn't usually noted for its empty roads or quiet atmosphere, but Formula E's demo run along its famous Strip this week meant things didn't get too noisy



In the shops

Desirable new releases

OFFICIAL F1 2013 DVD

£16.99 – dukevideo.com

You may have been a bit turned off by Sebastian Vettel's nine-race rout in the second half of F1 2013, but the official DVD review will, in time, remind you what a momentous effort it was. Watch it again, with all the DVD's extra bits, and rejoice in the fact that you witnessed it.



McLAREN M7A 1:18 MODEL

£129.99 – autosport.com/shop

Spark has released a 1:18-scale diecast model of McLaren's first grand prix winner, the M7A, in which the boss, Bruce McLaren, won the 1968 Belgian GP at Spa. The replica has incredible detail, something that collectors now expect from an expensive, large-scale model.



'LEG-ENDS' RACING SOCKS

£20 – gearboxgifts.com

Fancy faster and more fever-looking feet? This racing socks three-pack, resplendent in Ferrari #27, Martini stripes and Aston Martin British Racing Green colours ought to help. They come in adult men's one-size-fits-all and are 70 per cent cotton. Each design is also available as a two-pack for £15. Check the website for other retro-related racing clobber.



WHAT'S ON

ON TRACK AROUND THE WORLD

DAKAR RALLY

Argentina-Bolivia-Chile

January 5-18

dakar.com

Week two of the South American endurance rally-raid adventure begins in Chilecito in Argentina, heads into the Bolivian salt flats and reaches Antofagasta, Chile's second largest city, by Wednesday.

DUBAI 24 HOURS

Dubai, United Arab Emirates

January 10-11

24hdubai.com

ANDROS TROPHY

Round 4/7

Isola 2000, France

January 10-11

tropheeandros.com

TOYOTA RACING SERIES

Round 1/5

Teretonga, New Zealand

January 11-12

toyotaracing.co.nz

Young guns from around the world kick off an intensely-fought five-round single-seater series down under, in which they will race on consecutive weekends.



Andros Trophy
heads to Isola 2000

AUTOSPORT GREAT DEBATE

Intra-office talking points: SHOULD FORMULA 1 START USING REVERSED GRIDS?



YES

SAYS ANDREW VAN DE BURGT EDITOR-IN-CHIEF

First of all, here's a reality check. The world has changed since you started watching F1. The rise of the internet and the ways of accessing information have dramatically increased people's viewing options and reduced their attention span.

Now, all sport – at a professional level – is part of the entertainment business. In order to justify a prominent position on TV, whether that's free-to-air or subscription, it needs bums on seats.

The purists may like the idea of lining the cars up in order of how fast they are and then watching them drive around in that order for two hours. If purity is what you want, go to an F3 race (which I love, by the way). You won't have a problem finding an empty spectator bank.

In my F1 utopia, the season starts with a collective launch. After each team reveals its new car – starting with the team that was bottom of the constructors' standings – its drivers perform a single qualifying lap. This determines the starting order for the opening race and is the only qualifying session of the year.

From then on, each grid is formed in reversed championship order. I've heard some say that this will devalue a win. I don't get that. That assumes a Caterham or Marussia transforms pole into victory. I think there's a strong

case to suggest that Sebastian Vettel would have still won those final nine races under the reversed-championship-order format, but the races would just have been a *lot* more interesting, and would finally confound those blinkered detractors who claim he can't race.

As we have seen in races such as last year's Chinese GP, when Red Bull knew its cars would have to fight through the field, they were set up to overtake. If that was going to be the case in every race then the design of cars would evolve so that there was no need for gimmicks such as DRS.

As a taster, imagine the grid for Malaysia last year: Pastor Maldonado and Nico Hulkenberg on the front row followed by Nico Rosberg and Daniel Ricciardo, with Fernando Alonso and Kimi Raikkonen at the back. It sounds a lot better to me.



NO

SAYS KEVIN TURNER FEATURES EDITOR

Making entertainment the main focus of rules can be self-defeating. Just take a look at the impact of central service parks and shorter stages in World Rallying, or the push to start races in dangerous conditions because of TV schedules. If you sell the soul of something people will switch off anyway.

F1 is the pinnacle of the sport. It should be about the best car/driver winning. If one combination dominates, that's tough. We all want a close contest, but sometimes that just isn't going to happen.

Usain Bolt isn't made to start the Olympic 100-metres final with heavy boots, or from 10m behind everyone else, because it's pure sport. The entertainment comes through seeing someone special perform. It should be the same for F1.

Mixing up the starting order does

increase the possibility of the 'wrong' driver winning GPs, which surely makes each race worth less. The fastest driver *may* come through, but that's only likely if they have a significant performance advantage. In close-fought seasons, it simply may not be possible. Remember the damp squib of Fernando Alonso stuck behind Vitaly Petrov in the 2010 Abu Dhabi GP?

Reversed grids are more acceptable in junior categories because they can help drivers learn different facets of the game, but drivers still talk about 'proper' wins as opposed to reversed-grid victories.

Even championships designed more around the fans, such as the British Touring Car Championship, have kept the focus in the right place. With traditional qualifying and two conventional races, the best driver over a weekend is more likely

to come away with good points than the winner of the partially-reversed-grid finale. It adds entertainment value without skewing the season too far.

When it comes to spicing up F1, I can live with KERS/ERS, because of their environmental advantages. I've even managed to stomach DRS on the grounds that it's a plaster over the thornier subject of the cars relying too much on aerodynamic wings that create dirty air. But reversed grids are a step too far.



Could last year's Malaysian GP
have been made more interesting?

Your guide to the best events taking place in the UK and around the world – plus TV and online

ON TELEVISION



Follow the Dakar Rally on Eurosport

THURSDAY JANUARY 9

0000-0030, 0800-0830 Eurosport
 Dakar Rally: Stage 4
0400-0500 Premier Sports
 NASCAR special:
 Closest Finishes in History
1215-1335 Motors TV LIVE
 Dubai 24 Hours: Qualifying
1430-1605 Motors TV LIVE
 Dubai 24 Hours: Night Practice
2100-2305 Motors TV
 Dubai 24 Hours: Qualifying Highlights
2200-2230 Eurosport
 Dakar Rally: Stage 5

FRIDAY JANUARY 10

0800-0830, 1230-1300 Eurosport
 Dakar Rally: Stage 5
0930-1205, 1330-1605, 2000-2205 Motors TV LIVE
 Dubai 24 Hours
2200-2230 Eurosport
 Dakar Rally: Stage 6

SATURDAY JANUARY 11

0000-0030, 0730-0800 Eurosport
 Dakar Rally: Stage 6
0355-0420 Channel 5
 Motorsport Mundial
0700-1035 Motors TV LIVE
 Dubai 24 Hours

2000-2305 Motors TV
 Dubai 24 Hours: Highlights
2130-2200 Sky Sports F1
 The Sand Grand Prix
 Damon Hill and Johnny Herbert head to the desert to take on Lewis Hamilton and Nico Rosberg.
2200-2230 Eurosport
 Dakar Rally: Rest Day
2200-2300 Sky Sports F1
 2013 AUTOSPORT Awards: Highlights

SUNDAY JANUARY 12

0600-0610 ITV4
 World of Sport:
 The Good, the Bad and the Ugly
1135-1445 Motors TV
 Dubai 24 Hours: Highlights
2000-2100 Channel 4
 Speed with Guy Martin
2200-2230 Eurosport
 Dakar Rally: Stage 7

MONDAY JANUARY 13

0600-0835, 1855-2205 Motors TV
 Dubai 24 Hours: Highlights
2230-2300 Eurosport
 Dakar Rally: Stage 8
2300-2330 Eurosport
 Inside the ERC

ONLINE

HOT ON THE WEB THIS WEEK

YouTube **McNISH'S FIRST WIN FOR AUDI: SEARS POINT 2000**



SEARCH FOR: 2000 Sonoma Race Broadcast - ALMS - Tequila Patron - Racing (2:20:03)
 After reading Gary Watkins's feature looking back on why Allan McNish was a sportscar racing great, watch the full coverage of the 2000 Sears Point ALMS race – one of the six wins our man picks out as the Scot's best – and you'll be in no doubt about the assertion.

AUTOSPORT+

Exclusive content coming up in our premium website this week

AUTOSPORT's Edd Straw argues that more comprehensive superlicence regulations could help reduce the number of unsuitable drivers reaching the Formula 1 grid. Plus, keep up with the latest news, developments and interviews from Birmingham's NEC as AUTOSPORT International kickstarts 2014.

GET AUTOSPORT ON THE MOVE

- IN THE IPAD ISSUE THIS WEEK
- NEW FOOTAGE OF FORMULA E IN LAS VEGAS
- ON SALE ALL OVER THE WORLD FOR ONLY £2.99

Download it now from autosport.com



Revved up over what's on the box

Like long-distance lorry drivers and sixth-form goths, Guy Martin loves speed. But rather than use it to override the tachograph to deliver on time or to stay up all weekend writing poetry, Martin channels it to break records.

Martin, of course, rose to prominence after becoming the unintended star of the excellent 2011 bike racing documentary *TT3D: Closer to the Edge*.

And it's the same blend of unique turn of phrase and northern charm that makes *Speed with Guy Martin* so watchable.

In episode one, Martin attempts to set a new British speed record for riding a pushbike. Set in 1986, on the M42 the day before it opened and in the slipstream of a mega Bastos-liveried TWR Rover SD1, the

record stood at a frankly scary 110mph.

The show started with a potted history of 'motor pacing' – the process of riding behind a shielding vehicle – which even in the early 1900s topped speeds of 60mph and has claimed the lives of many of those foolhardy enough to attempt it.

"You've got to be nuts to do it in the first place," was the advice of erstwhile

record holder Dave Le Grys.

Fuelled by a never-ending brew and enlisting the help of the type of workshop warriors that are the backbone of the British motorsport industry, Guy gets the tools to do the job, but does he have the physical ability to pedal a bike at such extreme speeds? He decides a fitness test is required. The results show that he's

disappointingly average, with good endurance but a low power output. "If it means breaking a record, I'll do what it takes, no problem. I say no problem, but it's not going to be easy is it?"

With a tow from a 1000bhp racing truck, literally fitted with a barn door as a shield, he cracks 100mph at his first attempt. But there's not a runway long enough to get the bike up to a high enough speed, so they decamp to Pendine Sands.

However, the bike is unstable on the loose, forcing Guy reluctantly to agree to wider tyres. It works, and pushing so hard – "I was blowing out me arse" – he hits 112.94mph, before no doubt enduring the sleepless night familiar to all speed fiends.

Revved Up



Martin clocked 112mph behind this truck!

Stephane Peterhansel

“My first win in a car was special, especially after the problems we had”

■ Paris-Dakar Rally ■ January 1-7, 1991 ■ Mitsubishi Pajero ■ First car win adds to six bike victories



Peterhansel took first of five car victories in 2004 for Mitsubishi

DPPI

WHEN I WON THE DAKAR FOR the first time driving a car in 2004, it was a very special feeling. I had won it on a motorcycle six times before, but for the first time I was able to share the feeling with my co-driver. And that was very nice.

When you are on the motorbike, it is just you, you, you. All the time you are thinking about yourself and how you can make it through. You know, before I ever won the Dakar, it was my dream just to compete on that event.

And the first victory in the car, when I was driving for Mitsubishi, was a good one – especially after we had some problems and still managed to win.

But I think the one I will have to say is my favourite is the first win on a bike. I had competed in this race four times before I took victory. And the year I won, in 1991, it was not an easy race. Don't forget, at that time, Dakar went on for three weeks and 14,000 kilometres (8700 miles) not two weeks and 9000 kilometres

(5592 miles) like this week's event.

But, even though we raced for one week more, we would still only have one rest day. It was incredible. The 1991 event was one of the original ones, which started from Paris and finished in Dakar. I was leading in the middle of the race, but then I got some technical problems on my Yamaha, but I still managed to overtake again in the second half.

But, like always on the bike, it was just hard work.

Obviously, the rally has moved away from Africa now and I can't see it going back there because of the problems with the terrorists. South America is a different kind of a rally, more like WRC roads in some places. You know, since we went there, I haven't slept in the tent once – but maybe 20 years of sleeping in the

tent in Africa is enough!

The nature of the race has changed from that first win as well. Last year, in South America, the longest stage was 4h45m, so less than five hours and still acceptable. But in Africa we would be racing for eight or nine hours a lot of the days and this is difficult – you had to stop just to go to the toilet. Obviously stopping for a pee-pee takes time, so in the morning of the race I am very careful and I don't take the coffee, just a little bit of water. And then, when we are racing, I try to find the balance between sweat and drinking. But, for sure, when we finish the stage we are a little bit dehydrated. After the stage I drink six or seven litres straightaway.

Physically, the bike is very hard on the body, but you also have to work really hard for the win in the car as well. And winning in the car is about being a team. And this year I am in a good team again. ✖
Stephane Peterhansel was talking to David Evans

PROFILE



GETTY

FRENCHMAN STEPHANE

Peterhansel has become known as 'Mr Dakar'. All six of his motorcycle wins (1991-'93, '95, '97-'98) came on Yamahas, but his five victories in cars (2004-'05, '07, '12-'13) have been split between Mitsubishis and Minis – three in Pajeros and two in the X-Raid-run ALL4 Racing. Peterhansel, now 48, is attempting a sixth four-wheeled success this week, again in the Mini.

NEXT WEEK F1 TITLE NEARLY MEN
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