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FORCE INDIA



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POLE POSITION

Will Red Bull stay one step ahead of the rest?



THE FACT that so many of this year's new Formula 1 cars have taken their inspiration from last year's Red Bull tells you everything you need to know about the quality of Adrian Newey's 2009 design.

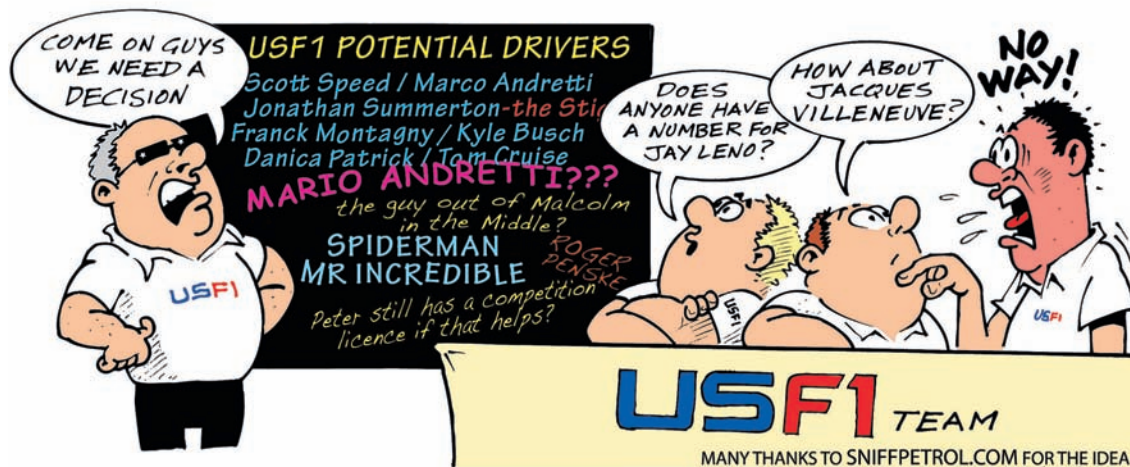
Never one to rest on his laurels, for 2010 he's been able to take full advantage of the double diffuser — a rare aero trick he failed to fully exploit last year.

The result is the RB6, which Mark Hughes and Gary Anderson get beneath the skin of in this issue. It retains many of the styling cues of its predecessor, but as always the devil is in the detail, which is where our experts come in. Go to page 26 for the full story.

Its initial potential will be on display as you read this, as testing at Jerez will already be underway. You can follow this live on AUTOSPORT.com, which will be providing up-to-the-minute news and views directly from Spain, where Edd Straw will be in situ. Don't miss it.

Andrew van de Burgt, editor

BAMBER'S WEEK



NASCAR

NASCAR's calm before the storm

The gruelling 36-race NASCAR Sprint Cup schedule gets underway this weekend with the big one: the Daytona 500. And this year, cars will be quicker thanks to increased carburettor restrictor plates and, with more relaxed bump-drafting rules, they'll be able to bang into each other, too. Let's go racin' boys!

Photography: Levitt/LAT







McLaren stands out with long-run pace

Ferrari might have topped the timesheets at last week's Valencia sessions, but Lewis Hamilton proved McLaren has the speed to fight for race wins, says EDD STRAW

McLaren displayed impressive race-distance pace with its new MP4-25 at last week's Valencia Formula 1 test, despite failing to match Ferrari's lap times.

Lewis Hamilton's long-run consistency drew praise, while Jenson Button's best time in the first test with his new team was understood to be close to Fernando Alonso's Ferrari pace when fuel loads are taken into account.

Ferrari was the only team to get under the 1m12s barrier, with Alonso posting a 1m11.470s on the final day. Despite rival teams conceding that Ferrari is on top, Hamilton's consistent runs lapping in the 1m12-1m13s bracket on heavier fuel suggest the MP4-25 will be strong over race distances.

Williams technical director Sam Michael acknowledged Ferrari's speed, but believes that the Italian

team does not hold a big advantage.

"Ferrari looked to be a little bit quicker than McLaren, but they are not as quick as the headline times suggest because of the different fuel loads," Michael told AUTOSPORT. "The best runs to look at are the ones where they are heavy. Ferrari are ahead, but they are definitely reachable."

Fellow technical directors James

"Ferrari may be ahead at the moment, but they are definitely reachable"

Williams tech chief Sam Michael

Allison of Renault and Sauber's Willy Rampf corroborated the Italian team's outright speed.

"Looking at the overall performance, Ferrari seems to

be quite quick and consistent," Rampf told AUTOSPORT.

Allison added: "Our view would be that Ferrari look good."

MERCEDES UPGRADES

Mercedes also showed promise, although team boss Ross Brawn admitted it has been forced to make steps to improve its weight distribution to correct a handling imbalance. Brawn remained confident in the car, despite Michael Schumacher's fastest lap being one second adrift of Alonso.

"We're still learning about the tyres, and we have a handling imbalance at the moment, but we have identified the areas where we can make improvements and these will be ready for Jerez," said Brawn. "It's always difficult to judge the pace early on, but we're in a reasonable position. Our

long-run pace is good and the car is performing much as expected."

A major diffuser upgrade and new front wing are expected to give a significant boost in performance for the season-opening Bahrain GP.

ON TO JEREZ

The four-day Jerez test, which kicked off yesterday (Wednesday), is expected to offer more accurate data on which to judge the relative performance of the cars.

Not only will Red Bull, Force India and Virgin join the fray, but the track has a better range of corners than the predominantly low-speed Valencia layout.

"Jerez is more representative of the challenges posed by grand prix tracks," said Allison. "It has a couple of high-speed corners, which Valencia lacks. It will be interesting to see the cars at a different track."



Button got his first miles in new McLaren

AUTOSPORT SAYS...

EDD STRAW
F1 EDITOR

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You want answers? I'll give you answers... but you're not going to like them. Why? Because right now, just like me, you're desperate to get a snapshot of the competitive order in F1. But all we can hope for, based on one test with variable fuel loads, is a stolen glimpse. Yes, Ferrari is fast. Yes, McLaren is in good shape. Yes, there's more to come from Mercedes. Yes, the Sauber is pretty quick. Does that mean that the result of the Bahrain Grand Prix on March 14 will be 1st Fernando Alonso, 2nd Lewis Hamilton, 3rd Michael Schumacher and 4th Pedro de la Rosa? Does it hell.

Some trends are emerging. It's clear that Ferrari hasn't botched the F10 like it did last year's F60 and the Prancing Horse is likely to be at, or near, the sharp end come Bahrain. But to glance at the headline lap times and draw conclusions is a fool's errand. Even studying long-run data is of limited value, such is the variety in fuel loads. In testing, talk is cheap. Remember Jean Alesi's searing pace in the Prost in the winter of 2001? Four lousy points was all it added up to.

AUTOSPORT will always bring you the most measured analysis of testing performances. We all want to conjour a pecking order, but it's too early to leap to conclusions. Jerez will be a better barometer, but most thrilling of all is the fact that already things look close. Very close.



Alesi in 2001: fast in testing but slow in races

F1 TESTING: VALENCIA, FEBRUARY 1-3

POS	DRIVER	CAR	MONDAY	TUESDAY	WEDNESDAY
1	Fernando Alonso (E)	Ferrari F10	-	-	1m11.470s
2	Felipe Massa (BR)	Ferrari F10	1m12.574s	1m11.722s	-
3	Kamui Kobayashi (J)	Sauber-Ferrari C29	-	1m12.056s	-
4	Pedro de la Rosa (E)	Sauber-Ferrari C29	1m12.784s	-	1m12.094s
5	Lewis Hamilton (GB)	McLaren-Mercedes MP4-25	-	1m12.256s	-
6	Robert Kubica (PL)	Renault R30	1m15.000s	1m12.426s	-
7	Michael Schumacher (D)	Mercedes MGP W01	1m12.947s	-	1m12.438s
8	Jaime Alguersuari (E)	Toro Rosso-Ferrari STR5	-	-	1m12.576s
9	Nico Rosberg (D)	Mercedes MGP W01	1m13.543s	1m12.899s	-
10	Jenson Button (GB)	McLaren-Mercedes MP4-25	-	-	1m12.951s
11	Vitaly Petrov (RUS)	Renault R30	-	-	1m13.097s
12	Rubens Barrichello (BR)	Williams-Cosworth FW32	1m14.449s	1m13.377s	-
13	Nico Hulkenberg (D)	Williams-Cosworth FW32	-	-	1m13.669s
14	Sebastien Buemi (CH)	Toro Rosso-Ferrari STR5	1m14.762s	1m13.823s	-
15	Gary Paffett (GB)	McLaren-Mercedes MP4-25	1m13.846s	-	-



Red Bull RB6



Virgin VR-01



Force India VJM03



REMEMBER WHEN...

JANUARY 17 2007



...Alonso first tried the McLaren MP4-22? The Spaniard topped the timesheets in Valencia on his first day in the new McLaren. He'll hope that his speed in the Ferrari F10 is the start of a happier relationship than before...

For all the latest news, analysis and photos from this week's launches...

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FERRARIO/LAT

Reliability was the focus of Cosworth's return

Cautious Cosworth in slow start

Williams ran with a detuned engine at Valencia but says more pace is to come after reliability test is a success

Cosworth and Williams are confident that the engine manufacturer's V8 unit has yet to show its full potential after a conservative start at Valencia.

AUTOSPORT understands that Williams ran the Cosworth with a rev limit that kept the engine below the 18,000rpm maximum in order to ensure that it was reliable. In total, the Williams-Cosworth completed over 1200kms in the hands of Rubens Barrichello and Nico Hulkenberg, with its heavy fuel-load times 1-1.2 seconds off

the pace set by Ferrari.

Asked whether the Cosworth unit had been trimmed back, Williams technical director Sam Michael said: "The main aim was to get miles on the car and engine so it would be fair to assume that. I wouldn't like to go into any more detail, but we weren't running to our full 'duty cycle' because of various things that we wanted to check and get right.

"Compared to when the Cosworth last ran in 2006, a lot has changed," he added. "It's now controlled by the standard ECU, so the mapping

changes and a lot of the test was about sorting that. But all of the performance and fuel parameters were pretty much what we expected them to be."

The Williams-Cosworth package has yet to show its true pace, and if the reliability is maintained once the engine is running regularly at the full 18,000 rpm, the car is likely to be more competitive than its Valencia pace suggested.

Cosworth's Mark Gallagher declared that he was happy with the first test.

"There is a lot to come in terms of knowledge and performance," Gallagher told AUTOSPORT. "We were always most concerned about ensuring that the engine was first and foremost reliable and making sure that it worked with the systems in the car.

"From the Cosworth point of view, the test was very satisfactory. If we'd had an engine failure or a reliability issue, it would have been a concern, but that didn't happen and we were very happy."

New narrow tyre praised

FORMULA 1 teams were surprised that the introduction of a narrower front tyre did not present more of a challenge at last week's Valencia test.

The front tyres are 25mm narrower than in 2009, but teams had few complaints at Valencia.

Renault technical

director James Allison told AUTOSPORT: "On the first day there was a fair bit of understeer with our starting setup but on the second day we got most of that dialled out and we were left with a well-balanced package."

Bridgestone technical manager Tetsuro

Kobayashi added: "The grip levels were in line with our predictions. The overall grip balance of the cars is more even, front to rear, than with last year's sizes. However, this judgement is based on one test, so we will have a better idea after testing at Jerez and Barcelona."



STALEY/LAT

TEAMS SET ABOUT DIFFUSER DEVELOPMENTS

The chance to optimise the double-diffuser design concept for 2010 has been grasped by all the teams, and a wide range of complex versions were on show at Valencia. However, GARY ANDERSON asks if some have taken it too far

Double diffusers appear to have dominated the design concepts of most of the new cars. But how far can you push it, and when does it become a problem rather than a performance enhancer?

If you look at the McLaren, an awful lot of attention has been paid to this area. But I don't know where you would get an intake big enough to feed that exit area, as the trailing edge of the upper surface of the double diffuser has been connected to the underneath of the lower-beam wing. This effectively uses the high-speed airflow on the underside of this wing to help scavenge the diffuser.

Consider the double diffuser as a duct with its top, bottom and side surfaces using the low pressure behind the car to make it function, as opposed to the normal diffuser, which is a



surface expanding the airflow against the ground surface. This has a perimeter that can get airflow as required. Airflow can only be expanded at a certain rate, otherwise it will stall and give up working altogether. Combine that with the problems that this can also inflict on the lower-beam wing – and therefore on the upper wing, as they all

'talk' to each other – and this concept confuses me.

Both the normal diffuser and the second diffuser end up working as one and creating a low pressure area underneath the complete car. But if either alters in performance it will lead to instability in the overall aerodynamics of the car and this reduces driver confidence.



Renault optimistic after R30 debut

RENAULT TECHNICAL director James Allison is confident that the team will move up the grid this season after the R30's debut test at Valencia.

Robert Kubica's fastest lap was a 1m12.426s, just under a second off Fernando Alonso's test-topping mark. However, Allison would not draw conclusions about Renault's place in the competitive order because of the variable fuel loads.

"I got a much better feeling coming away from the first test [with the R30] than I did from any of the R29 tests," Allison told AUTOSPORT. "If we look

at the fuel levels, we have reason to be guardedly optimistic. We have a reliable platform that seems to respond nicely to setup changes and we have a adequate level of performance.

"The rate of improvement over the coming tests will be dramatic as people bolt on their 'real stuff' and we've got a bunch of things at the factory."

Renault was not due to make any major bodywork changes for this week's Jerez test, but Allison confirmed that there will be changes "under the skin".

60 SECONDS WITH

WILLY RAMPF

Sauber tech boss



The Swiss team made a flying start to pre-season testing and was second only to Ferrari on fastest lap time. After a difficult winter, it was the perfect start to the 2010 season.

Are you confident that you have a competitive car after the performance at Valencia?

We have to be careful because nobody knows exactly what the competition is running with regard to fuel. We can only make assumptions, as overall there is about a four-second difference.

Was Sauber's outright speed motivated by a need to attract interest and sponsorship?

Our lap times were not on an empty tank to please anyone. It was a normal programme.

We've seen different concepts in terms of car length. Have you gone in the right direction?

I'm happy with the car concept we have. Our car is fairly long and the advantage is that the fuel cell has a lower centre of gravity. The longer car doesn't seem to have any disadvantage in handling; if it did, we would have seen it during the testing at Valencia.

It was the first time you have run the Ferrari V8 engine. Were you happy with it?

We are quite happy on the engine side, but we are still learning the engine and the mapping.

Is it easy to get an impression of what fuel loads other teams are running or are some of them playing games?

I don't think they are playing games because the testing period is so small.

What is the programme for Jerez?

We will do setup work on the aerodynamic and mechanical side. There is still work to be done on the engine and gearbox, and we will do some long runs on different fuel loads to get a better feel for the new tyres.

Willy Rampf was talking to AUTOSPORT F1 editor Edd Straw

Sauber was on the pace in Valencia testing



VIRGIN HITS THE TRACK

Virgin Racing was the first of the new F1 teams to shakedown its car when it completed a two-day outing around the Stowe Circuit last week. Timo Glock and Lucas di Grassi both took to the wheel, with the team pleased despite a couple of minor technical hitches.



P34 VIRGIN RACING
VR-01 LAUNCH



The new VR-01 had a successful shakedown

StefanGP entry bid gains pace

The Serbian team is continuing its preparations for a 2010 entry as other start-ups falter. By MARK GLENDENNING

Stefan Grand Prix is inching closer to securing a place on the 2010 Formula 1 grid as speculation heightens that one or more of the existing start-up teams might fail to make it to the opening round in Bahrain.

Last week's shakedown of Virgin's VR-01 and the scheduled launch of Lotus's car tomorrow [Friday] has thrown fresh attention upon the other two new teams, US F1 and Campos Meta1. Rumours that both teams are struggling intensified when Bernie Ecclestone told the *Sunday Express* that he didn't expect either team to make it to the first race, in March.

"I think we won't see Campos and I don't think we will see the Americans," Ecclestone said. He added that he had more confidence in StefanGP's plans to race with equipment and support from Toyota. "They have got money from the Serbian government – I have spoken to the prime minister."

US F1 is understood to have discussed a possible dispensation to miss the opening three grands prix at last week's Formula 1 Commission, although this was denied by executive vice-president Peter Windsor.

"We will be in Bahrain," he told AUTOSPORT. "We may not be pretty, but we will be there. And from there we will grow."

Campos Meta1 is understood to have yesterday [Wednesday] faced its D-day regarding the fulfilment

of its obligations to Dallara, which was contracted to design the team's car. StefanGP was rumoured to have investigated the possibility of buying the Dallara design itself. This would effectively leave Campos Meta1 without a car, even if StefanGP pressed ahead with its plans to race what would have been this year's Toyota. However, this was denied by team owner Zoran Stefanovic.

"We are not talking about the design," Stefanovic told

AUTOSPORT. "We are talking with Dallara about development. We are not willing to go above that because we have an absolutely perfect relationship with Toyota. It is just extending capability, that's what we are talking about."

Stefanovic also maintained that his wish was to enter F1 on his own merits via an official FIA process, rather than capitalising on another team collapsing.

"Our intention, when it comes to looking at a possible entry, is to look at whether it is possible to have a 14th entry, and we think that is the best way to solve the problem," he said. "We are absolutely aware that the system of granting entries is through the FIA, so we are not expecting someone to give us an entry immediately."

StefanGP has already sent some advance freight to Bahrain in preparation for a possible late entry, although Stefanovic said that no cars or personnel would be sent unless the team had a guaranteed start.

The new outfit will test at the Algarve circuit later this month and will reveal its driver line-up, which is expected to include Kazuki Nakajima, in the coming days.



Stability is the key for Force India

FORCE INDIA'S on-track form this year will be boosted by the team being in the most stable position that it has found itself in for over five years, according to technical director James Key.

Key believes that the team, which has been under the ownership of Vijay Mallya since 2007, is now in a better position to consolidate its strong end-of-season form from 2009.

"It has been the most stable environment we've had for the past five or six years, and maybe even more than that," he told AUTOSPORT. "We now have

continuity and we have a flow, because we knew who the engine supplier was going to be and we had a very good lead-in to 2010.

"For the first time in a while, we are able to talk about developing in the long term rather than just the short term with different owners. It's a much easier situation to work in and you will see the difference in the performance of the car and the way it develops."

Team design director Mark Smith is also hopeful that the team will be able to maintain

the pace of development after improving its CFD and windtunnel facilities over the past year, at a time when the big teams are being forced to cut back.

"Our pace of development has been as good – or better – than some others over the last 18 months," Smith told AUTOSPORT. "Given that the big teams will have their eye on resource restriction, they have to come down to our level, so I'm hoping that it [being a small team] is not going to be too significant a factor."

P38 FORCE INDIA VJM03



CFD upgrades have aided team

Red Bull relying on old tricks

RED BULL has retained its pull-rod suspension as one of the key features on the RB6, the car that it hopes will allow it to go one better than last year and win the 2010 world championship.

The pull-rod configuration was one of the defining features

of the RB5. However, designer Adrian Newey was widely expected to revert to a more conventional layout with the new car which, unlike the 2009 version, has been designed around a twin diffuser.

Team principal Christian Horner told

AUTOSPORT that Red Bull is keen to build upon its strong finish to last season, when it finished the year with the strongest car on the grid but fell short of clawing back Brawn's early-season advantage.

"We've focused on our own numbers and

not got distracted about what everyone else is doing," Horner said. "We ended the season in good shape, with a very aggressive development path. I think we out-developed everyone and we've had a positive winter. We feel we've made good progress but we won't know until Q1 at Bahrain."

Horner also pointed to the fact that Red Bull is the only frontrunning team to have survived the transition from 2009 to 2010 without any major personnel changes as something that could work to its advantage.

"Continuity is the key factor," he said. "We've got absolute stability on the engineering side, and a well-balanced driver line-up."

Key elements from the RB5 have been retained



P26 RED BULL RB6 LAUNCH

THIS WEEK IN F1



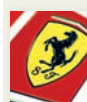
MERCEDES Nick Heidfeld has accepted a role as Mercedes GP's test and reserve driver for the season. The German had his first F1 test in a Mercedes-powered McLaren in 1998.



RED BULL Sebastian Vettel is due to have his first taste of the new RB6 tomorrow [Friday] at Jerez. He will run on the last two days of the test, with Mark Webber completing the first two days of running.



McLAREN Jenson Button said that the MP4-25 failed to give him the same instant wow-factor as the 2009 Brawn after driving the car at Valencia. "It's difficult to feel it here because the track is not like others we race on," he said.



FERRARI MotoGP legend Valentino Rossi believes that a switch to Formula 1 would be "difficult to envisage," despite the world champion setting competitive times when he tested a 2008 Ferrari at Barcelona last month.



WILLIAMS Valtteri Bottas has been named as the team's test and reserve driver for the season. The 20-year-old Finn, who won the 2009 Masters of Formula 3, is racing in the F3 Euro Series with ART Grand Prix this year.



SAUBER Technical director Willy Rampf praised new signing Pedro de la Rosa after his fine showing at Jerez. "His feedback is very good, plus he's precise and consistent," Rampf said.



RENAULT The Renault F1 Driver Programme colours will appear on the Charouz-Gravity Racing Lolas that will compete in AutoGP. Tester Jan Charouz will be among the drivers.



FORCE INDIA Design director Mark Smith has backed Vitantonio Liuzzi to show well. "It didn't fall in place for Tonio last year, but I'm sure he can start where he left off at Monza," he said.



TORO ROSSO Sebastien Buemi is confident that the team's new status as a full constructor will be instrumental in pushing it up the grid. "It's good motivation for the team because we can do everything our own way," he said.



LOTUS Lotus was due to shake down its new machine at Silverstone on Tuesday – as AUTOSPORT closed for press. The official launch of the car will take place tomorrow [Friday].



CAMPOS A financial agreement is believed to have been reached to help secure the team's future. AUTOSPORT understands that the investor is A1GP boss Tony Teixeira.



US F1 Adrian Valles has been linked to the vacant second drive with US F1 by the Spanish media. Valles has previously tested F1 cars for Midland and Spyker.



VIRGIN Technical director Nick Wirth was delighted following a trouble-free shakedown of the new VR-01 over two days at Silverstone. "We completed over 100km," he said.

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MPH Mark Hughes

AUTOSPORT grand prix editor

The need for the governing body to re-examine F1's engine freeze regulations highlights the difficulties inherent in reining in the sport's fiendish cleverness

Something Christian Horner said last week really struck a chord: "We do have a major concern that the engine freeze has effectively frozen-in a disadvantage for some engines and we are relying on the governing body to deal with that accordingly." The arms race that decimated manufacturer support of F1, the self-inflicted damage done then, is still going on – even with most of the manufacturers gone.

Back at end of 2006/early '07, when the original engine freeze homologation was brought in, Mercedes effectively produced a brand new engine, specially for the freeze regs. It took its inspiration from what had begun '06 as the most powerful – the Cosworth. The similarity wasn't too surprising given that a lot of the Cosworth guys had been recruited by Mercedes.

Even within the freeze regulations, there was clearly a lot of development potential within the Merc motor. The game since '07 for most of the engine producers has been to find ways of getting through changes of spec under the guise of reliability improvements that in reality also release more performance. It's a fine line to tread, of course, because any

improvement in efficiency can be used to either make something more reliable – or keep the reliability the same but increase the performance. Wonder which one the teams tend to go for...

Some have devoted more resource to this process than others. Renault, for example, desperately trying to curb its expenditure, initially took the engine freeze literally and through '07 and '08 watched as it fell further behind on performance. Last year Renault was allowed some spec changes, but even so, by the end of the season it was reckoned to be in the region of 30-50 horsepower adrift.

The engine freeze regulations have undoubtedly saved the sport a lot of money – but some more than others. Those determined to spend have still been able to do so. As ever, F1 behaves like a virus, forever adapting to restrictions put upon it. As ever, it will spend whatever it can get its hands on, no matter how the regs are framed.

But how to deal with the current imbalance? That's quite a challenge for the governing body. It seems crass to ask the producer of the best engine to decrease its performance back to the level of the others – and to spend money doing so. But you could argue it should never have been developed beyond the level of the others in the first place. It also seems crass to have an F1 where you aren't supposed to compete on engine technology and where tyre competition has been outlawed.

Perhaps in the short term there needs to be a refreezing, an attempt at getting a more even spread and then not accepting any changes. But longer term, beyond the expiry of the current formula to 2013, technical competition needs to be opened out because otherwise F1 is in danger of becoming fossilised, a sort of single-seat NASCAR.

But that takes us back to the idea of the divisive budget caps. If there is still an arms race now, when we have highly restrictive technical regs and only one true manufacturer team, surely it would be worse if you opened out the regs? But there are club racing categories with vastly more scope for technical competition than exist in F1 – but the money isn't there to fully exploit that freedom so it isn't a problem. We already have a 'resource restriction' coming into play next year and that's perhaps another short-term solution.

But you know what? There will be ways around it. Very clever ways, discovered by the cleverest people. Just as there have been ways around the engine freeze. As a veteran F1 engineer said last year, F1 has always been – and should always be – about clever people beating less clever people. Every time you try to squeeze an F1 problem away, it simply reappears as a bubble somewhere else. F1 is just too damn clever for its own good.

The person that works out the solution to that basic conundrum will be more than merely clever. ☒



Renault engines trailed Merc by 30-50bhp in '09

GILHAM/GETTY

“F1 is in danger of becoming a sort of single-seat NASCAR”

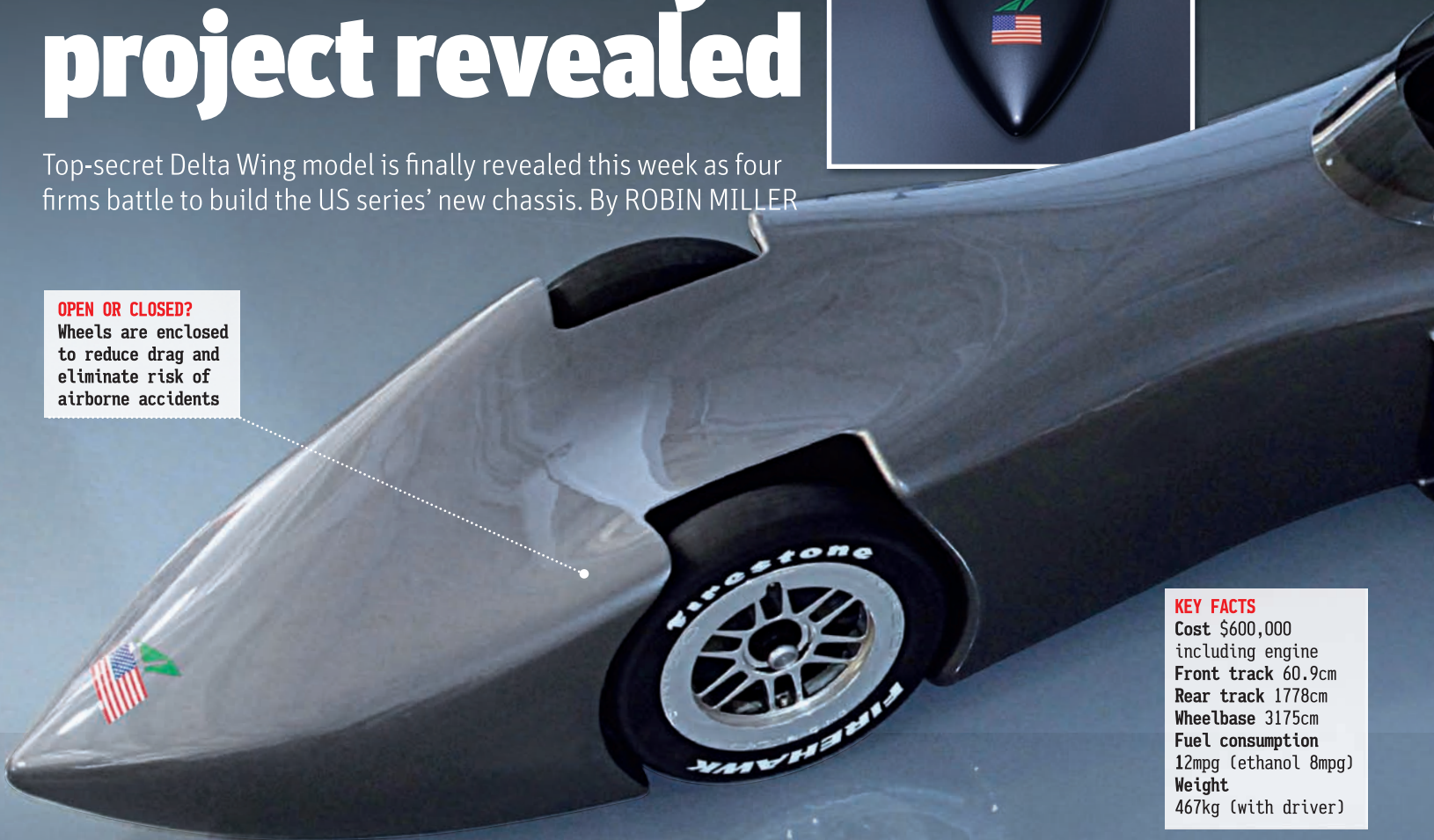
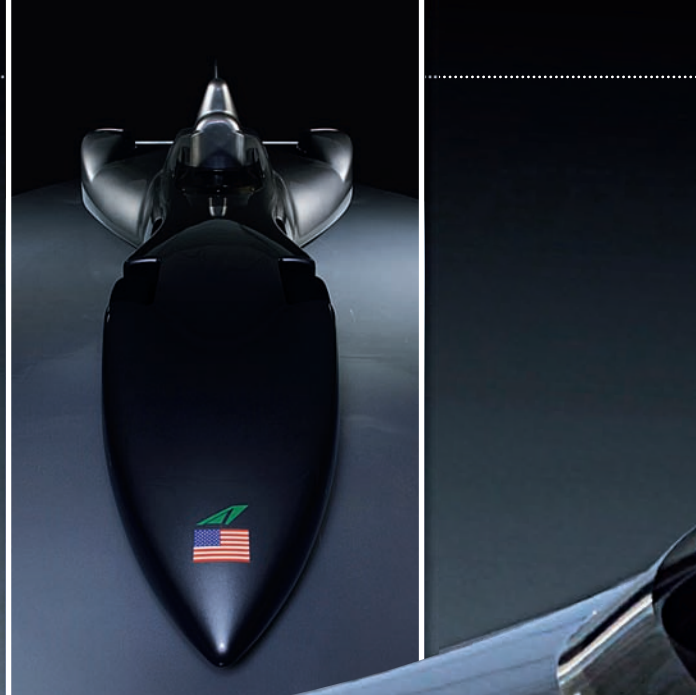
INDYCAR 2012

Futuristic Indy project revealed

Top-secret Delta Wing model is finally revealed this week as four firms battle to build the US series' new chassis. By ROBIN MILLER

OPEN OR CLOSED?

Wheels are enclosed to reduce drag and eliminate risk of airborne accidents



KEY FACTS

Cost \$600,000 including engine
Front track 60.9cm
Rear track 1778cm
Wheelbase 3175cm
Fuel consumption 12mpg (ethanol 8mpg)
Weight 467kg (with driver)

The eagerly anticipated Delta Wing IndyCar proposal broke cover this week at the Chicago Motor Show.

A model of the car, which has the backing of most IndyCar Series teams, was revealed after two months of intense speculation about the radical concept.

Delta Wing is one of four manufacturers (along with Dallara, Lola and Swift) making proposals to the series in preparation for a new chassis formula in 2012. It is the brainchild of Ganassi designer Ben Bowlby, who started work on it in January 2009, with funding so far coming from his boss, Chip Ganassi.

"Looking radical was never the objective," said Bowlby. "The Delta Wing shape is simply the outcome of addressing performance targets. Approaching it as an engineer, I was more aware of safety, performance,

efficiency and its relevance to the auto industry, as well as cost."

FIGHTING DRAG

One of the key features that defines the car is the fact that the wheels are enclosed, which reduces the risk of cars getting airborne when they make contact, and significantly decreases drag. Bowlby claims that reduced drag, coupled with a car that will be much lighter than its predecessor, means the chassis would only need a 300bhp engine to reach speeds in excess of 230mph at Indianapolis.

"The biggest resistance in an Indycar is the drag of the exposed wheels," he said. "At Indianapolis, 54 per cent of the drag is from the wheels. By fairing them, there's a huge efficiency improvement."

"Today's car is an aerodynamic brick with a huge engine that

spends its life burning fuel and components. It just shows how inefficient today's cars are and that's not surprising because the regulations have mandated inefficiency for decades. If this car had 500 horsepower it would run 270mph around Indy."

The car has also been designed with improving the on-track action in mind. Bowlby believes that by ditching the concept of front and rear wings in favour of ground-effect, the drivers will be able to race closely, but with the option to increase downforce for road courses.

"Wings are fragile, expensive, draggy and very turbulence-sensitive," he said. "The geography [shape] of this car and bodywork and aero behaviour is designed to allow better overtaking and closer racing. The aero layout allows us

to double the downforce by changing the height of the wicker [gurney flap] on the top surface of the bodywork. For \$10 worth of aluminium you can double the downforce."

SUSTAINABLE DEVELOPMENT

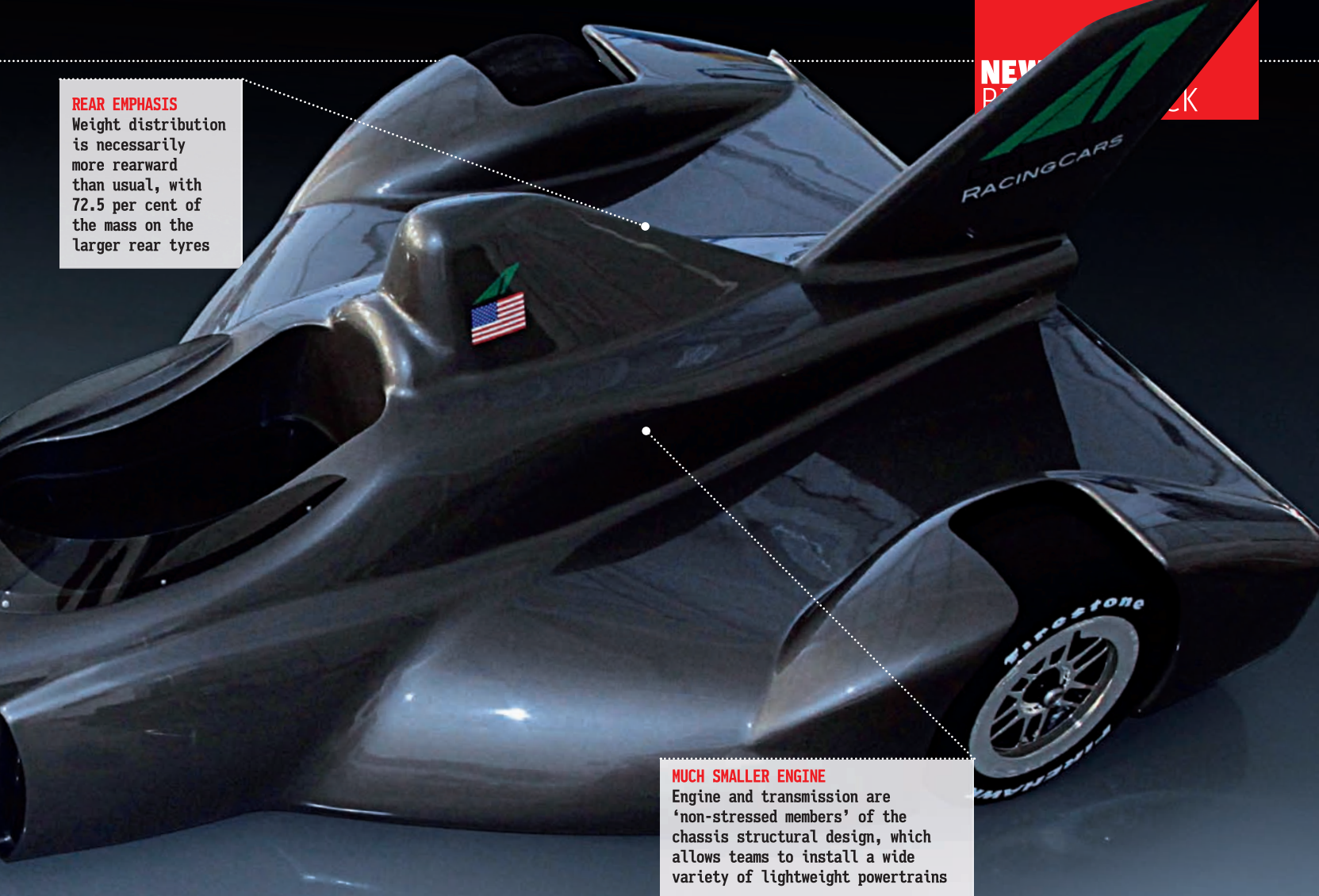
Delta Wing has predicted that it can have a prototype up and running by August, while Dallara, Lola and Swift are all presenting their own designs. Bowlby hopes that even if his idea is successful, other manufacturers will be able to get involved in the sport.

"Personally, I don't want 33 spec cars at the Indy 500 and there are lots of people I've spoken to who agree," he said, adding that he wants the car's components built in Indianapolis and merely okayed by the Delta Wing group.

"Our intention is to provide

REAR EMPHASIS

Weight distribution is necessarily more rearward than usual, with 72.5 per cent of the mass on the larger rear tyres



MUCH SMALLER ENGINE

Engine and transmission are 'non-stressed members' of the chassis structural design, which allows teams to install a wide variety of lightweight powertrains



Rear downforce can be increased significantly by using a bigger aluminium gurney flap

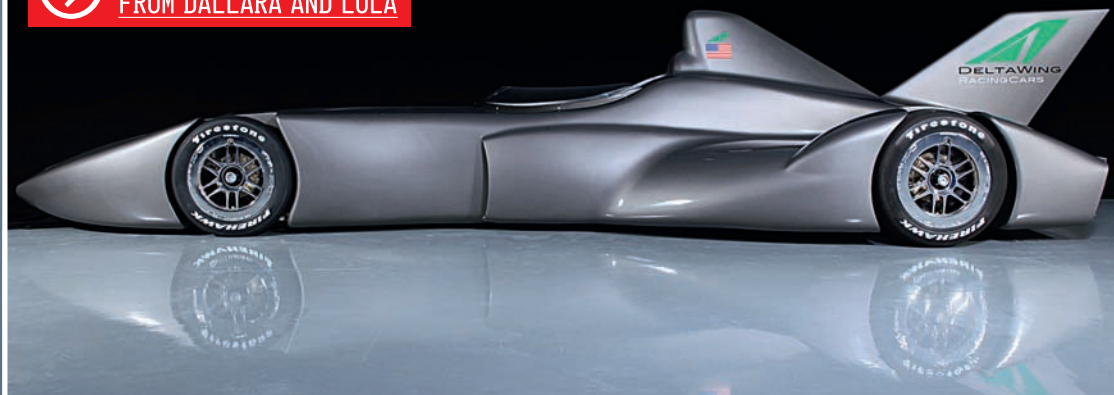
a platform for sustainable development of the cars and exclude no one who designs or makes racing car parts, be it Lola, Swift, Dallara, local suppliers, the auto industry and so on. This is America's premier-status single-seater formula we are talking about and it needs to be remarkable."

The car is being designed with a four-cylinder motor in mind, but Bowlby explained that his planned method of regulating fuel flow would enable other types of engines to be used. "We propose to control the rate of fuel flow to the engine as the way to contain speed while maintaining efficiency," he said. "Fuel flow will be our pop-off valve or restrictor plate."

A decision on the direction of the next-generation Indycar is expected in the summer, possibly as early as May.



P20 RIVAL 2012 BIDS FROM DALLARA AND LOLA



AUTOSPORT SAYS...

GLENN FREEMAN
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At first glance it's almost impossible to picture these things going around Indianapolis, but give yourself a bit of time before passing judgement.

When AUTOSPORT ran our first story about the Delta Wing car last month, the idea of an extreme-looking concept didn't strike me as the way to go. But having seen the pictures, and listened to the reasoning of those involved, this is starting

to make more sense.

After all, what point is there in the Indycar Series running cars that look like they've been rejected from a Formula 1 lookalike competition? If American single-seater racing ever wants to have any prominence again, it needs to do its own thing. Who cares if it's got half the horsepower and looks weird? If it really does make the racing better, and is so much cheaper to run

that more teams can make the grid, then this could be the shot in the arm Indy-style racing needs.

As ever with the US open-wheel scene, there's some controversy on the horizon as well. Reports in America suggest that Dallara's proposals (see p20) are being favoured by the IRL, and if that's true then expect a backlash from the teams supporting Delta Wing, which is the majority of the grid.

INDYCAR 2012



Dallara has offered IndyCar three options

One of the designs has similarities to the Delta Wing car (see page 18), while the other (below) is more conventional



Dallara reveals IndyCar proposal

Italian manufacturer produces three designs for IRL bosses to consider for new car in 2012. By GLENN FREEMAN

Current IndyCar Series chassis supplier Dallara has submitted three proposals for the 2012 next-generation car.

The Italian manufacturer revealed its own ideas less than a week before the Delta Wing car was unveiled yesterday (Wednesday). It also claims that it can reduce costs and achieve better fuel efficiency, as well as improving the quality of the racing

and raising the standard of safety in the series.

Dallara's head of R&D and US Racing, Andrea Toso, told AUTOSPORT: "We are confident we can fulfil the key points designed by the League. Safety is a priority, and when you design all of the aspects with safety in mind you get a clear picture."

While the Delta Wing team has been working on its proposal for just over a year, Dallara only started work on its ideas in September, following a visit from series bosses. In that time it has produced three designs, spending around two months on each. One has some similarities with the Delta Wing car, while the other two appear to be more conventional single-seaters.

"We wanted to give them a spectrum from more radical to more

evolutionary concepts," Toso added. "Our concepts have provisions for a less powerful engine — it has less weight and less drag, which means less fuel consumption. The current car has around 640bhp, and we believe we could achieve the same speeds at Indy with 570bhp."

The manufacturer has also quashed fears that it would have higher costs because of its European base by promising to set up a facility in Indianapolis.

Dallara CEO Andrea Pontremoli told AUTOSPORT: "We are still working to fulfil what we have announced, especially on the cost side. Moving to the US will help us reduce our costs. We don't only want to build up the cars there, we want to establish Dallara USA with all of the capabilities we have in Europe for development."

Lola suggests dual designs

BRITISH MANUFACTURER Lola has put forward a plan that would give teams the choice of two sets of performance-balanced bodywork.

The former Champ Car chassis supplier has joined Dallara and the Delta Wing group in revealing its plans in the last week, while Swift released details of its car as AUTOSPORT closed for press (left). But the key to the Lola proposal is that it would avoid the problem of all the cars looking the same by offering two choices of bodywork that could be raced against each other on a level playing field.

No images were released, but Lola confirmed that it had not gone down a 'futuristic' route.

Swift revealed shots of its own IndyCar concept as AUTOSPORT closed for press



IN BRIEF



CHILTON'S SWITCH

Max Chilton (left) replaced Alexander Rossi at Ocean for last weekend's Abu Dhabi GP2 Asia

round. Rossi took Diego Nunes's Meritus seat while Arden replaced Rodolfo Gonzalez with Javier Villa.

INDYCAR NAMES NEW CEO

Randy Bernard has been named as the IndyCar Series' new CEO, in place of Tony George. Bernard was

previously head of the Professional Bull Riders' Association.

NEW TEAMS FOR AUTO GP

Gravity Racing has entered AutoGP with the Charouz squad. The team, which will run as Charouz-Gravity Racing, has signed Jan Charouz and Walter Grubmuller to drive two of its four cars. Euronova has also entered the championship.

PREMA SIGNS F3 PAIR

Prema Powerteam has named Formula BMW Europe runner-up Daniel Juncadella and German F3

midfielder Nicolas Marroc as drivers for its F3 Euro Series squad.

BRUNDLE MAKES F3 SWITCH

Alex Brundle has quit Formula 2 and switched to British F3 with Russell Eacott's race-winning T-Sport squad. Meanwhile Fortec has promoted last year's National Class champion Daniel McKenzie to an International Class Dallara alongside Oli Webb.

WILSON'S NEW DRIVE

Former McLaren AUTOSPORT BRDC Award winner Stefan Wilson has

signed a full-time Indy Lights deal with Bryan Herta Autosport. Meanwhile Dutchman Junior Strous, who won twice in 2009, has joined Team Moore Racing.

GP3 FILLING UP

Jenzer Motorsport has signed Formula Master podium finishers Pal Varhaug and Simon Trummer for its GP3 assault this season. Rival squad Mücke Motorsport, meanwhile, has announced that

German driver Nigel Melker has filled one of its seats.

CORONEL GETS A DIESEL

Dutchman Tom Coronel will pursue a third World Touring Car independents title in a SEAT Leon TDI this year. SUNRED Engineering, which will run Coronel again, has unveiled his 2010 livery (below).



NASCAR

NASCAR braced for 'crash-fest'



Recent Bud Shootout produced big wrecks

NASCAR SPRINT CUP racers have warned that this weekend's Daytona 500 will be a strung-out, single-file procession or a crash-fest after they sampled new rules revisions for the first time at the track last week.

A larger restrictor plate – last used in 1989 – has increased horsepower and speeds, while rear-wing aerodynamic revisions have increased tyre wear as a result of added downforce. A relaxation of the bump-drafting rules has increased the potential for accidents.

Two multi-car crashes in practice last week were followed by a caution-strewn Budweiser Shootout – the traditional curtain-raiser to the 500. The race was ended after an eight-car pile-up, sparked by Greg Biffle's car on old tyres being rammed from behind by a faster Jeff

Gordon on fresher rubber.

"The cars were pretty out of control, which was fun – you really had to drive them," said Gordon, below. "They said bump-drafting is okay now, so that's what it's going to take to win the race. It's the Daytona 500 next, everybody's going for it and you're going to see more risks taken."

The 500's start time has been moved forward for 2010 to ensure it runs in daytime, rather than in



Gordon thinks more risks will be taken

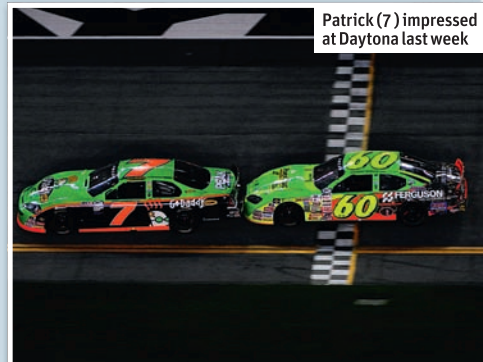
cooler and more grippy evening conditions. The warmer temperatures could lead to a more processional race, according to frontrunner Denny Hamlin: "I think it's going to get strung out. When the temperatures are up, handling is more of an issue."

However, former Daytona 400 winner Jamie McMurray argued that it will lead to speed differentials between well- and poor-handling cars: "Because they eliminated the bump-drafting zones, we're shoving each other all the way down the backstretch. It is so easy when you have new tyres to want to shove those guys that don't."

Another new addition for this year is a 'shark fin' on the left-rear C-pillar, aimed to stop cars taking off during high-speed spins.

NASCAR

Danica confirmed for Nationwide



Patrick (7) impressed at Daytona last week

DANICA PATRICK has confirmed that she will join the NASCAR Nationwide grid for the series opener at Daytona this weekend following her successful stock car debut in the ARCA RE/MAX Series at the Florida venue last Sunday.

The Indycar racer had originally planned to make her debut in NASCAR's second-tier series with JR Motorsports at Fontana next week, but brought it forward after her first stock car outing yielded an impressive sixth place.

"Racing in the Nationwide Series was my goal during the entire two-month preparation process, but we wanted to make sure it was the right thing to do," Patrick said. "The ARCA was a blast, and I'm not ready for my Daytona Speedweeks to end just yet. I want more racing."

Patrick's ARCA debut in the team's #7 Chevrolet almost came to an early end when she made contact while battling with Nelson Piquet Jr.

"I was trying to get a run that I had on the inside, and they say that you can't cross over the yellow line to improve your position but everyone was slowing down," she said. "I was following the one ahead of me, and the guy came down over the front of me and I just held to the yellow line. I took myself out unfortunately, but you can't go over the yellow line."

She pitted twice for repairs and tyres and dropped to 24th, but recovered to secure sixth after a late scrap with Truck Series regular Ricky Carmichael.

GP2

Turvey bullish after GP2 win

OLIVER TURVEY is confident that he can reel in iSport team-mate Davide Valsecchi's points lead in the GP2 Asia Series after scoring his first GP2 victory in last weekend's feature race at Abu Dhabi.

The Briton currently trails Valsecchi by 19 points, but believes that his increasing confidence with the car will give him a chance to close the gap over the remaining two rounds in Bahrain.

"I think Davide is catchable," Turvey told AUTOSPORT. "He has got a big lead, but it's not over until it's over. The first GP2 Asia weekend was about

Turvey is keen to build on Abu Dhabi success



learning the car, and this weekend we were able to put it into practice. I'm very strong at the minute, and I hope to keep it that way."

Turvey and Valsecchi will both remain with iSport for this year's GP2 main series.

BRITISH F3/FR 3.5

Vergne eyes twin programme

CARLIN'S BRITISH

Formula 3 title hopeful Jean-Eric Vergne could run a parallel programme in this year's Formula Renault 3.5 series with SG Formula.

The 19-year-old Red Bull Junior driver claimed the runner-up spot in both the Formula Renault Eurocup and Western European Cup Stephane Guerini's SG Formula team last season.

"Red Bull have approached me to see if I would have any objections to Jean-Eric competing in Formula Renault 3.5 with SG, and I've none at all," said Carlin team principal Trevor Carlin.

"I'm happy for him to have the opportunity to gain some experience. I believe in Red Bull's approach to racing. They have a sink or swim philosophy – if their

drivers can't jump into a World Series car and do the job then they're not going to be able to jump into an F1 car."

The British Formula 3 International Series calendar shares just one clashing date with Formula Renault 3.5, on May 1-2, where the Frenchman's priority would be with Carlin for the Silverstone Formula 3 round.

WORLD GT1

Nissan GT1 deal for Dumbreck

Dumbreck makes full-time comeback with Sumo Nissan GT-R in new FIA GT1 world championship

Sumo will run two Nissans in the new FIA GT1 series

Former DTM and Super GT driver Peter Dumbreck will race for the new Sumo Power Nissan team in the FIA GT1 World Championship this season.

Dumbreck has been signed to drive one of the two Nissan GT-Rs run by the British team in the new 10-round championship. The 36-year-old Scot will share Sumo's lead entry with factory driver Michael Krumm, who raced for the Gigawave Nissan team last year.

Dumbreck, who sat out most of 2009 after losing his Super GT seat with the Kraft Lexus squad, described the deal with Sumo as his "ideal drive".

"Super GT is a great championship and is massive in Japan, but no-one knows what is going on in Europe," he said.

"This drive is perfect for my career because I'll be racing on the world stage.

"It looked like I had a chance to go back to Japan, but racing in a European-based championship was exactly what I was looking for. That it has world championship status makes it all the better. I'm also racing an iconic car in the GT-R."

Dumbreck was contacted by Sumo team manager Allen Orchard in the wake of the announcement at AUTOSPORT International in January that the Sussex squad had taken over the Nissan deal originally slated for Gigawave Motorsport.

"I've known Allen for a while. His team [Emotional Engineering] was sponsored by Valvoline at the same time as they backed me in the DTM," he added. "Michael [Krumm]



Dumbreck will share with Michael Krumm

had also mentioned my name, so things progressed pretty quickly."

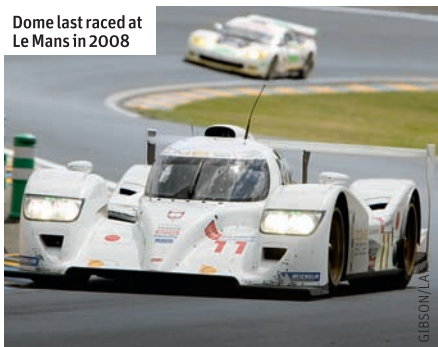
Orchard said: "Peter is respected by a lot of people in the company and with the driver line-up we've got in the lead car, we are expecting to be a championship contender from the outset."

An announcement of the second car's drivers is expected late this

week or early next week.

Sumo is aiming to shake down the Japanese manufacturer's machines next week ahead of the next round of performance-balancing testing at Paul Ricard on February 22-23. Nissan was represented at last week's test at the Algarve circuit by Swiss Racing Team.

Dome last raced at Le Mans in 2008



LE MANS

Dome targets 2010 Le Mans return with OAK

JAPANESE CONSTRUCTOR

Dome is teaming up with the French OAK team to return to the Le Mans 24 Hours after skipping the 2009 event.

Dome has entered the Judd-powered S102 coupe that qualified eighth for the

2008 event under its own name and has yet to talk about its relationship with the OAK team. However, it is understood that OAK is effectively leasing the LMP1 coupe from Dome to run alongside its pair of Pescarolo-Judd LMP2s.

Dome project manager Hiroshi Yuchi promised a "further announcement" in the near future, while OAK team manager Francois Sicard insisted that "right now we do not know the full involvement".

"They helped us last year

at Okayama [in the Asian Le Mans Series event] and now we are helping them logistically and administratively," he said.

Super GT regular Sebastien Philippe is so far the only driver nominated to drive the car.

IN BRIEF



DAYTONA DEBUT FOR PIQUET

Nelson Piquet Jr will make his NASCAR Truck Series debut at Daytona on Friday in a Red Horse Racing Toyota. The Brazilian made his first stock car start in last week's ARCA race at the same track (above) and was classified 27th after an accident.

ALESI LMS DEAL CONFIRMED

Former grand prix winner Jean Alesi's deal to race in the Le Mans Series with the AF Corse Ferrari team has been confirmed. The 45-year old is expected to drive the team's lead 430 GT with Gianmaria Bruni and Jaime Melo.

AUDI NAMES LUHR AS RESERVE

Lucas Luhr has been nominated as Audi's reserve driver for the Le Mans 24 Hours after being dropped from its full-time prototype line-up for this year. He and Marco Werner will race Audi's R8 LMS GT3 contender this year.

STRAKKA ACURA FOR KANE

Jonny Kane will race for the Strakka Acura squad in the LMS and the Le Mans 24 Hours. Kane, 36, joins Danny Watts and Nick Leventis in the team's HPD-badged Acura ARX-01 LMP2 contender.

TECH-SPEED SIGNS GEORGE

Tech-Speed Motorsport has completed its British Touring Car Championship line-up by signing John George to partner Paul O'Neill in its Honda Integra-Rs this season.

TWO TRUCKS FOR BUSCH

Kyle Busch Motorsports will continue to field two entries in the NASCAR Truck Series this year, despite Miccosukee withdrawing as primary sponsor for the car. Busch will share with Brian Ickler this year.

MATECH FORD GT REVEALED

Matech Competition has built an all-new version of the Ford GT (below) for this year's FIA GT1 World Championship. "Not a single element is the same as in 2009," according to team boss Martin Bartek.



LE MANS

Renault F1 in Pescarolo Le Mans link

THE NEW owner of the Renault Formula 1 team has linked up with the Pescarolo Sport squad for this year's Le Mans 24 Hours.

The exact nature of the deal between Genii Capital and Pescarolo has yet to be revealed despite Ho-Pin

Tung and Jan Charouz, two of the drivers looked after by the investment company's management arm, Gravity, being named in one of the team's Le Mans entries.

Renault F1 and Gravity boss Eric Boullier said it was "too early" to talk

about a relationship that is rumoured to extend to the purchase of the Le Mans-based team.

Pescarolo's owner, the Sora composites group, took up both of the team's automatic entries for Le Mans this year, but it is known that company boss Jean Py has little interest in running a race team. He bought the squad, which had a deal to build a new car for the Le Mans racing school, from Henri Pescarolo last winter.

Pescarolo's future with the team is unclear. He is in a legal dispute with Sora, but hasn't ruled out being involved in its Le Mans programme. Pescarolo is also trying to put together a deal to run one of the cars that bears his name in the Le Mans Series. He opted against filing a full-season entry for the series and is "still fighting to find a budget" to enter on a race-by-race basis.



Pescarolo could change ownership

LE MANS

Highcroft for Le Mans

THE US Highcroft Racing team will contest the Le Mans 24 Hours for the first time this June.

Team boss Duncan Dayton, who took his squad into the international sportscar arena in 2006, has made no secret of his desire for Highcroft to contest the French endurance classic. The team has now won a place on the grid with the Acura ARX-01c LMP2 contender with which it will defend its American Le Mans Series crown this season.

Dayton, who as a driver has

competed at Le Mans four times, said: "Getting an entry for Le Mans is extremely satisfying and we are very proud to be invited. Our goal has always been to establish Highcroft as a leading international motorsport organisation: to do that at Le Mans is essential."

The only confirmed driver so far is 2009 Le Mans winner David Brabham, who has raced for Highcroft since it became one of Acura's factory sportscar teams in 2007.

Highcroft's LMP2 is Le Mans-bound



GT2

Collard to Corvette

FORMER PORSCHE factory driver Emmanuel Collard will race for Corvette Racing in the big sportscar enduros in 2010.

The Frenchman, who lost his Porsche drive when the German manufacturer downsized its factory squad for this season, has landed a seat in one of the new GT2 Corvette C6.Rs at the Sebring 12 Hours, the Le Mans 24 Hours and the Petit Le Mans 1000-mile race at Road Atlanta. He replaces Marcel Fassler, who has joined Audi's prototype ranks, and will drive alongside Corvette

stalwarts Oliver Gavin and Olivier Beretta.

The deal marks a return to the General Motors fold for Collard, who was part of the Cadillac prototype programme in 2000-02.

He previously tried out for Corvette Racing at Sebring in the winter of 2003-04 but lost out on the drive to Italian Max Papis.

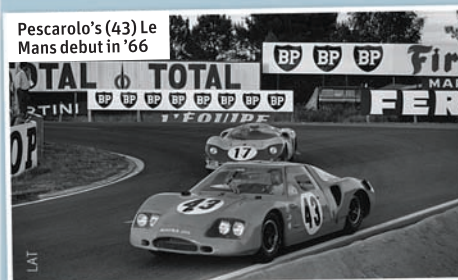
Collard's signing, which was sealed over the weekend of the Daytona 24 Hours last month, was due to be officially announced this week.

Henri at Le Mans

PESCAROLO HAS BEEN A LE MANS REGULAR SINCE 1967

Henri Pescarolo's career is inextricably linked with the Le Mans 24 Hours. A tally of 33 starts as a driver and 10 as a team owner could be about to come to an end

43
RACES



Pescarolo's (43) Le Mans debut in '66



Solberg is ready for a fight in private Citroën

WRC

SOLBERG: I'M NOT GIVING UP

Petter Solberg has scotched stories that this will be his last season in the World Rally Championship, with the 2003 champion promising he has no intentions of retiring.

The Norwegian commented that he would struggle to repeat the massive effort he's put in this winter to build a private team capable of carrying the fight to the factory teams – stating that this would be the final time he would do that.

"I'm at the maximum now," said Solberg, "I couldn't have done any more for this year and I don't think I would be able to do it again. But, I'm not going anywhere. We need some more manufacturers to come in and that's what I'm waiting for. In the meantime, I intend to be fighting at the top this year. I'm pushing my own limits this year. Maybe I'm stupid to take the manufacturers on, but I'm going to try. My car feels good, and I'm ready for round one."

WRC

Loeb scotches retirement rumours

Multiple world champion's special 'get-out' clause in his Citroën contract fuels speculation of impending walk-away

Sebastien Loeb has moved to defuse mounting speculation that he could quit the World Rally Championship at the end of the season, after it was revealed the Frenchman insisted a get-out clause be installed in his two-year contract with the factory Citroën squad.

Loeb's deal runs to the end of next season, but Citroën agreed to allow him the option to walk away at the end of 2010. Rumours suggests this move is linked to the change in technical regulations in the sport – Loeb has always made it clear that he has little interest in

driving anything slower than the current World Rally Car.

Loeb denied the option was installed to cover the switch from C4 WRC to the DS3 WRC, which he has already started testing.

"The option's not for the new car," he said. "I'm sure I will like it. I drove it one time and maybe it would be frustrating to develop the car for one year and then not to race it one time."

"The option is for my own motivation. Maybe at the end of the season I say, 'Okay, now I am fed up and I want to do something

else'. That's the only reason for this option. I wanted to have the possibility to say I stop if I want."

Loeb's team principal Olivier Quesnel said he remained relaxed about Loeb's position, adding: "He is under pressure for a long time so we decided together that he will

stay for the next two years. But if he gets bored – I'm sure he won't – he can say, 'I stop'. But, for me, it's nothing. I am really sure he will be interested in the DS3."

Quesnel was not so quick to deflect rumours of growing pressure on Loeb's team-mate Dani Sordo. Asked if the arrival of Kimi Raikkonen in the Citroën Junior Team added to the expectation of the Spaniard, Quesnel replied: "I think [Sebastien] Ogier is more pressure for Sordo. Dani, he is a professional driver and he has to be at the top – this is the job."



Citroën boss Quesnel (l) with Loeb and Sordo

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WRC

Ford gets behind Hirvonen title bid

MIKKO HIRVONEN has been given number one status in the Ford team as the Finn aims to go one better than last year and land the World Rally Championship title.

Ford hasn't won a drivers' title since Ari Vatanen guided a privately-run Escort to the 1981 crown and, in an effort to turn that around, the M-Sport team has taken the unprecedented step of prioritising its drivers for 2010. Hirvonen's team-mate Jari-Matti Latvala has been left in no doubt that his job is not to win rallies this season, but to support his team leader.

Team principal

Malcolm Wilson said: "We've had to put in a strategy that everybody knows about and Jari-Matti is very clear on what his role is. This is not something we have ever really done before. It's a case of really

having a clear understanding – that's why we've gone public with this decision, so it's there for everybody to see."

Latvala, who came close to losing his seat after crashing four times

last season, said: "I'm now a second driver, supporting Mikko. I have to back off a little bit, but on the other hand it is a chance for me to really work on finding some consistency, which I have been missing."



➔ **P56 WRC PREVIEW**

Hirvonen's title attack boosted by Ford status

IN BRIEF



McRAE AWARD FOR SHOW

Colin McRae will be remembered at this year's Rally Show at Chatsworth (June 5-6). The Colin McRae Driver of the Show award will go to the most entertaining driver. McRae will also be remembered at this week's Rally Sweden, where the Colin's Crest Award returns for its second year. The winner jumps the furthest on the leap in Vargasen (above).

GRONHOLM TESTS FOCUS

Marcus Gronholm has completed a 120-mile test in the Ford Focus RS WRC he will drive on this week's Rally Sweden. He said: "The feeling was good and it was nice to be back." Gronholm also tested a Super 2000 Fiesta for the first time, driving his protege Andreas Mikkelsen's Swedish event machine.

AL-ATTIYAH FOR IRC

Former Production Car champion Nasser Al-Attiyah will make his IRC debut on next month's Rally Argentina, round three of the series, in a Skoda Fabia S2000. The Qatar driver is thought to be considering

a seven-round IRC programme with a Rene Georges-tuned Fabia. He will also contest the S2000 WRC in a Fiesta S2000.

FRANCO BALLERINI

Co-driver Franco Ballerini has died following an accident on the Ronde di Larciano rally in northern Italy last Sunday. The 45-year-old's Renault Clio R3, driven by Alessandro Ciardi, clipped a fifth-gear corner on a slippery road and rolled. Ciardi was also taken to hospital, where he remains in a critical condition. Ballerini had contested a number of events as a driver, including Ypres last year, before switching to co-driving.

BREEN FLIES IN GALWAY

Just days after celebrating his 20th birthday, Craig Breen gave the Fiesta S2000 its first competitive run in Ireland (below) and finished second overall on the Galway International Rally. He will tackle both the Irish and British series in the VK-backed car this year.



WRC

Thin-ice worries for Sweden



The ice on the Swedish roads may be too thin

FORD TEAM leader Mikko Hirvonen has warned that the weather conditions in Karlstad for this week's WRC-opening Rally Sweden could be too cold.

Hirvonen's concern is that the prolonged cold weather has not given the roads the chance to form a solid ice base. The Finn fears that, despite predicted temperatures of around -15C, the competing crews could be faced with gravel coming through the snow.

"There is a lot of snow," said Hirvonen. "But not so much ice. When it's very cold like this the snow doesn't melt onto the road to allow it to freeze. On the smaller roads we will have a light-powder snow, the first few cars will clear that and then we will be down to the gravel. We will have some good snowbanks, but it can be hard for the tyres."

AUTOSPORT SAYS...

DAVID EVANS
RALLIES EDITOR

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I couldn't help but chuckle at the prospect of raising an internet forum discussion topic with Sebastien Loeb. The subject under scrutiny, as usual, was the easy life rally drivers have these days.

Recently, there's no doubt, drivers in the WRC have been pampered with a life of 'cloverleaf' contentment. That's about to come to a shuddering halt in Sweden this week.

Rally Sweden is the real deal again. Granted, there might not be a mammoth number of stages or a zillion competitive miles, but it's still going to be arduous.

In mileage terms, day one is a drive from London to Perth in Scotland. Day two is Perth back to London before two and a bit loops of the M25 on Sunday morning.

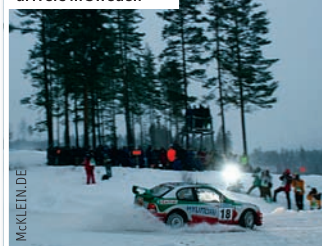
Loeb will leave parc ferme in Karlstad tomorrow (Friday) at 0530 and he won't be back in it for at least another 17 hours. Saturday's more of the same.

Imagine the gripping that'll go on at the post-event press conference on Sunday afternoon. But frankly, who cares? They're getting to drive the best cars on the best roads. If they don't fancy it, then stand aside.

Good on the Swedish organisers for giving us a testing event again. Not to mention the chance to watch, and then have a go at, the final hairpin on the Sagen stage on Saturday.

Don't be surprised if Loeb engages you forum folk in some forthright views soon...

There'll be some tired drivers in Sweden



REMEMBER WHEN...

FEBRUARY 17 1980



...a two-wheel-drive car last won the Swedish Rally? It was 1980 and Anders Kullang was untouchable for the second half of the event in his Opel Ascona 400. It would prove to be the Swede's only WRC victory.

LAUNCH DATE:
FEBRUARY 10
LAUNCH VENUE:
JEREZ

RED BULL RB6

BY MARK HUGHES

CHASSIS Red Bull RB6

ENGINE Renault RS27-2010

DRIVERS



5

Sebastian
Vettel



6

Mark
Webber

TEST/RESERVE DRIVERS

Daniel Ricciardo & Brendon Hartley

TEAM OWNER Dietrich Mateschitz

TEAM PRINCIPAL Christian Horner

CHIEF TECHNICAL OFFICER Adrian Newey

CHIEF DESIGNER Rob Marshall

HEAD OF AERODYNAMICS Peter Prodromou

HEAD OF RACE ENGINEERING Ian Morgan

HEAD OF CAR ENGINEERING Paul Monaghan

CHIEF ENGINEER, VEHICLE MECHANICS

Mark Ellis

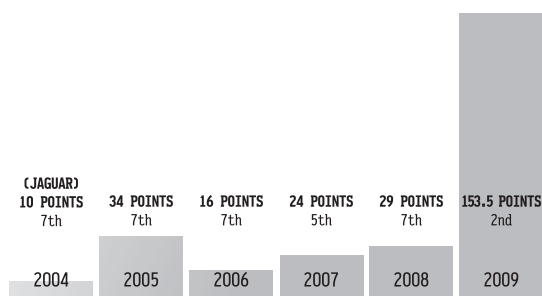
RACE ENGINEERS Guillaume Rocquelin

(Vettel), Ciaran Pilbeam (Webber)

TEAM MANAGER Jonathan Wheatley

CHIEF MECHANIC Kenny Handkammer

CONSTRUCTORS' POINTS 2004-09



MISSION STATEMENT

"I think having continuity in driver and engineering line-ups is going to pay big dividends this year"

CHRISTIAN HORNER



Is this the car that will again rewrite the rule book?

Here it comes, the car F1 waits with bated breath for. The Red Bull RB6 might, given the devastating late-season form of its predecessor, be the car that raises the bar, that puts all speculation about who's fast and who's not into a different perspective. Now that most 2010 cars bear more than a passing resemblance to the '09 Red Bull, have Adrian Newey and his team been able to move the game on enough to render the imitators already obsolete?

In contrast to the other likely championship contenders – Mercedes, Ferrari, McLaren – Red Bull retains an unchanged driver line-up in Sebastian Vettel and Mark Webber. On a similar theme, continuity of the core engineering personnel in the Milton Keynes-based squad, a line-up that worked so brilliantly last year, is seen as very much as a key strength.

PULLROD RETAINED

One thing distinguishing the RB6 from every 2010 thus far launched is the very thing that distinguished the RB5: pullrod rear suspension. The low-mounted suspension rockers of the system brought a real aero and c of g advantage when based around the single diffuser of the original RB5. Although the suspension system was retained in the car's twin-diffuser guise, it was widely expected that, with a clean sheet of paper based around a twin diffuser, the RB6 would revert to a more conventional layout.

Clearly Newey feels he can have his cake and eat it, by retaining the upper-body aero advantage and c of g benefits of those low-mounted rockers without compromising the airflow through and out of the diffuser. It's a bold step, one entirely in tune with the bullish stance of the whole squad, as outlined by team boss Christian Horner.



"I'm surprised other teams haven't adapted it," he says, in a way that suggests he's hugely encouraged they haven't. "When you look at many of the 2010 cars there's a clear visual similarity at the front to the RB5 – just look at the front of the new Mercedes – and it's always flattering to be imitated, but I really thought more of them would have extended that imitation to the rear."

Up front, the car is visibly related to its predecessor. "Yes, there's a clear family resemblance," agrees Horner, "but there are a lot of very nice details that represent elegant solutions to the demands of the new rules."

In terms of wheelbase the car is somewhere between the super-long McLaren MP4-25 and compact Williams FW32. It carries over the RB5's innovative solution to the dimensional requirements of the

nose, with the characteristic hollowed-out look. It looks like an evolved RB5. Which might, if Newey and his design crew have succeeded in combining good double-diffuser flow with the enhanced upper-body flow enabled by the pullrod

"I really thought more of the teams would have extended the imitation to the rear"

TEAM PRINCIPAL CHRISTIAN HORNER

suspension, just allow the RB6 to take over where its predecessor left off.

"One of the most satisfying things about last year," says Horner, "was our development rate. We out-developed our principal competition and I think that's going to be key to this year."

DRIVER DYNAMICS

Vettel and Webber: it worked spectacularly well last year, Mark quick and combative enough to squeeze the maximum from the young charger, both good enough to be title contenders in their own right.

Vettel, as one of the hottest properties on the grid, is tied to the team for a long time, Webber for just this year. At 11 years Vettel's senior, Webber has only just made the breakthrough to grand prix victories, but is itching for more, far from ready to fall into the support role – and Horner is not about to structure the team around one driver. "We'll support them equally and we will have simultaneous development parts for them. Obviously if one is ahead going into the late stages then the other will be expected to support him.

"As for Mark's contract, he only had ►

GARY ANDERSON'S TECH FOCUS



By the end of 2009, Red Bull had the package to beat, even though the cars were hobbled by engines that were, mileage-wise, well past their sell-by date. The car was a real Adrian Newey package, complex with every detail looked at and optimised and very well engineered. Only a team that is ready to take on running a car like this can make it work race after race. It goes into 2010 with the same driver line-up, and both fit the bill very well. Webber brings honesty to the team – give him a good car and he will bring in results – while Vettel often gets more out of a car than is in there. He's a very bright star of the future who will need to call on that skill more often.

ENGINE COVER

This is very similar to last year with the central fin running right back to the rear wing. Red Bull is the only team that really uses it for what it's best at: carrying sponsor's logos. The cross-section of the rear bodywork around the gearbox is smaller and lower than most others – this is mainly down to the rear suspension layout. Keeping this area as small as possible helps the airflow to the rear upper and lower wing and also helps scavenge the airflow out of the diffuser – a significant contribution to overall performance.



REAR SUSPENSION AND DIFFUSER

The big question is: will the pullrod rear suspension compromise the double diffuser? I'm sure that with a bit of lateral thinking you can get the best of both worlds. If you consider that the double diffuser is a duct, as opposed to a normal diffuser which is a surface working against the ground, its inlet hole size – and therefore flow rate – can only really be expanded at a certain speed otherwise you get stall. With a bit of lateral thinking with this suspension concept you can achieve benefits.

◀ one year left on it last year too – before he broke his leg and shoulder. He performs under pressure and there's a natural reticence to commit long-term to a driver in his mid-30s, but as long as he continues to perform like he has we have no concerns. The team is very comfortable with him and we re-signed him before he'd won a race. He knows he has a very strong team-mate and they work well together.

"Both are very hungry. Mark is a very strong competitor but a gentleman. Seb has that burning desire that's sometimes very visible. Both are keen and professional. Mark has a lot of experience under his belt, Seb is developing really well."

ENGINEERING CONTINUITY

After years of getting the appropriate mix of people and structure, there is now a very stable engineering group, one that is hugely motivated and confident having produced what was 2009's fastest car.

"That group has made big steps over the past couple of years," says Horner, "and is working fantastically well. I

"Both Sebastian and Mark are very hungry and work well together"

CHRISTIAN HORNER



Will Newey again have outfoxed the opposition?

SIDEPODS

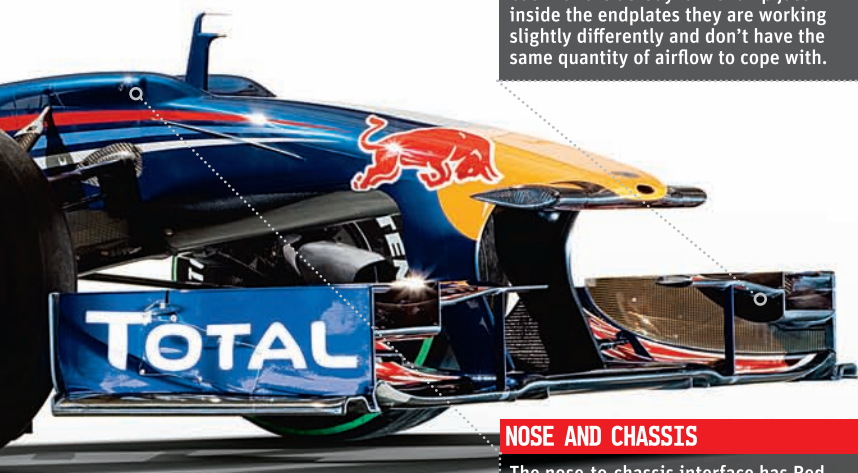
The radiator inlet is triangular in shape and blends nicely with the deeply undercut sidepod. The bargeboard, which helps the underfloor performance, is one of the biggest I have seen this year. I have no doubt this will be a very powerful device, helping overall diffuser performance. The sidepods then sweep away both in side and plan view into a neat coke-bottle area inside the rear tyre. Again, this helps the diffuser performance and also rear upper- and lower-wing performance.

FRONT WING AND ENDPLATE

The front wing is similar to last year in that it is a multi-element component, a very difficult package to optimise aerodynamically. When this is done correctly, the aerodynamic performance will be more consistent, considering the rest of the car has to work with the airflow coming off the trailing edge of the front wing. Consistency in this is area very important to overall car performance. The endplates are simple, but with the aerodynamic ramp just inside the endplates they are working slightly differently and don't have the same quantity of airflow to cope with.

NOSE AND CHASSIS

The nose-to-chassis interface has Red Bull lumps on the top outer corners – it was the first team to use this concept so, as expected, they have grown over the winter. If they get too big, driver visibility will start to suffer, so some compromise needs to be found between allowing the driver to place the car in a corner correctly and finding a few kilos of downforce. Sometimes in the drawing office it can be a one-sided compromise! The underneath of this area is nicely 'u'-shaped to help the airflow escape from under the chassis, which improves the overall front wing performance.



STRENGTHS

Adrian Newey-led design department has pushed out the boat and if it has found a way of reconciling pullrod suspension with the ultimate twin-diffuser layout then it has the best of both worlds. Team also has good continuity on the engineering and driver fronts.



WEAKNESSES

That Renault engine proved adrift of the best on both horsepower and reliability last year and, as things stand, that spec is frozen. Last year's car was over-hard on its tyres – something that will extract extra penalty under this year's rules.

MARK HUGHES' FINAL WORD



It all hangs on whether Adrian and his design team will have been able to find enough of an aero advantage over everyone else to overcome an engine deficit estimated at around 0.3s. The pullrod layout is surely a key part of that attempt. That is a big ask when up against competitors as strong as Mercedes, Ferrari and McLaren, all of whom have stronger motors and may well have caught up aerodynamically. The driver line-up sits right on the edge of internal competition that will

bring the best from both, without showing signs of spilling over into counter-productive animosity. The three key rival teams all begin with new line-ups, with unknown dynamics, so there may be an advantage to be had there. A lot probably hangs on whether the FIA will do anything about the current inequality of engines. You can bet that McLaren and Mercedes will be lobbying hard to leave things exactly as they are: it's going to be difficult enough to beat the Red Bull without giving them engine parity too!

think having continuity in both driving and engineering line-ups is going to pay big dividends this year."

But one area where they could possibly have benefitted from change is in the engine supply. Little secret is made of the fact that the team tried to secure a Mercedes engine deal but it was a move that was blocked. Instead, after looking also at Cosworth, the team is staying with Renault. Although this is believed to offer a slight economy advantage over the others, it's probably not great enough to offset the relative lack of power produced by the RS27.

"As an independent team our engine contract was up for renewal at the end of '09," Horner explains, "and we did

look around at our options. The choice was rather limited in practice. And we decided our best option was to renew with Renault, quite a straightforward choice in the end, which again gives us continuity. We do have a major concern, though, that the engine freeze has effectively frozen-in a disadvantage for some engines and we are relying on the governing body to deal with that accordingly. There is renewed vigour from the Viry part of Renault and I think there is the realisation that Red Bull Racing represents their best chance."



P30 VETTEL v WEBBER

Red Bull needs more from Renault engine (just not smoke)



COURAGE OF HIS CONVICTIONS

Mark Webber fully intends to build on his strong 2009, and *MARK HUGHES* thinks he'll do it



Sebastian Vettel's career progression is the stuff of dreams. As a junior driver he was the subject of a tug of love between two F1 teams that just hastened his arrival.

Once there, he made maximum use of his Friday BMW test role, using the advantages of the '06 Friday drivers – unlimited tyres, more revs – for a sequence of attention-grabbing fastest

times. Mark Webber, by then into his fifth season and generally overlooked by the top teams despite regularly pulling qualifying miracles out of less-than-great F1 cars, would have been forgiven any cynical reaction to the 'New Schumacher' buzz the teenage German was generating.

A few months later he'd hear it all again, when a rookie – 'The New Senna' – got a McLaren seat, the same McLaren that had passed Webber over repeatedly. Once, after yet again

transcending an ordinary car in qualifying Webber had bumped into Ron Dennis in the paddock: "You still managed by Briatore?" Ron asked. Webber replied in the affirmative. "Shame," said Dennis and walked off.

Just another bit of salt into the wound. It might have generated bitterness but instead it just stoked Webber's fire. The years passed by in a blur of defeated team-mates – Pizzonia, Wilson, Klien, Heidfeld, Rosberg, Coulthard – and unbelievable



Vettel and Webber will go head to head again in '10

qualifying performances that flattered the cars but which almost guaranteed a slide down the field on Sunday, tyres unable to withstand such a pace without the necessary downforce. But he hung on, never once got dispirited by the younger 'new Schumachers' or 'new Sennas' – though his frustration did inevitably flash through when the 'new Schumacher' drove into the back of him just as he was about to try a pass on the 'new Senna' for the lead of the 2007 Japanese Grand Prix.

Just as Hamilton had gone a long way to justifying his tag in '07, so in '08 did Vettel, with that stunning wet-weather victory for the little Toro Rosso team at Monza. At the end of that year the 'new Senna' was world champion, the 'new Schumacher' had won a grand prix – and Webber, by then 32 years old, still hadn't ever bettered third place in seven years of trying. But all was about to come to him – so it seemed. Not only was he to be paired with Vettel at Red Bull in '09 but it came at a time

of radically-new technical regulations that seemed tailor-made for the team's design genius Adrian Newey. He'd surely be racing at or near the front – and measured directly against a guy of already massive credibility.

Then didn't Webber go and snap his leg and dislocated his shoulder in the December of the off-season. Determined though he was not to ever use that as an excuse – and he never once did – this was a disastrous preparation for a huge challenge. ►

◀ Of course, the Red Bull RB5 was indeed very fast and of course Vettel did extract everything from it – four victories and runner-up in the championship. His irresistibly upwards career trajectory wasn't disturbed and, at just 22, he's now accepted absolutely as one of F1's true superstars. As such, he's widely fancied to go one better this year, in a Red Bull that's expected to start from where the RB5 left off.

Which leaves Webber where exactly? As a handy support, someone fast enough to beat the rest while following Seb home? Forget it. The watching world may have assumed that Mark's 2009 season – two wins and fourth in the title race – has finally settled the question of his true level as good but not great. For Webber, '09 was just the foundation.

"Last season was a bloody rewarding and relieving one," he says. "It was nice finally to have my arse in a competitive car after years of treading water. On most occasions I got the best out of it – save for qualifying at Suzuka – and I think I can hold my head high. It means that I'm coming into this season less in hope, more in conviction. I want to build on 2009."

Let's remind ourselves that, compromised though Webber's preparation was, great though Vettel was, the 'new Schumacher' did not dominate Webber in the way Michael used to dominate team-mates. Is that because Vettel isn't at that level or because Webber is a stronger team mate than Michael ever had? There were times when Vettel's qualifying pace left even Mark shaking his head – particularly his single-run specials in China that formed the crucial over which of them won the race and which was runner-up – but there were also several occasions in which Mark's race performances were stronger, so rubbishing the widely held paddock dogma that Webber was not as good a racer as a qualifier, a reputation that came from transcending the level of ordinary cars on Saturdays and having to live with reality on Sundays. In Spain Webber did a truly fantastic middle stint – almost lap-for-lap the equal of Button's against-the-odds race-winning performance – to nail the opportunity provided by a heavier fuel load to leapfrog past a team-mate stuck behind a slower car. Yes, the opportunity was created by Vettel being slowed down to Felipe Massa's Ferrari pace, but for Webber to make use of that required him to drive out of his skin.

Suzuka qualifying shunt was Webber's '09 nadir



It was a similar story in Turkey. Vettel's lap-one error when defending the lead from Button overturned the advantage Seb had given himself over Webber by out-qualifying him, and Mark maximised that with a great performance that gave him second to Vettel's third. These were tenacious performances from a deeply competitive and motivated soul. But as yet, Webber had never dominated Vettel throughout a weekend. As the circus arrived at Silverstone, a track he knew was going to be perfectly suited to the RB5's incredible high-speed corner abilities, he was on a mission. It was pretty much pre-ordained that a Red Bull was going to win there and he went into that weekend determined it was going to be him. Through Q1 and Q2 there was nothing in it; in fact Webber looked to have a slight

2009 STATS



Vettel v Webber		
Wins	4	2
Poles	4	1
F' laps	3	3
Points	84	69.5

Webber/Vettel pairing looks super-strong for '10



“Sebastian’s very young but I’ll do my talking on the track, when it will be all about who can hit those crucial laps”

Mark Webber



Webber was confident at British GP, but lucked out

edge. Then on the vital Q3 lap Webber found Raikkonen’s in-lap Ferrari dawdling on the racing line going into Stowe. Vettel pole, Webber third, consigning Mark to an opening stint trapped behind a slower car, just as Vettel had been in Barcelona. Result: Vettel first, Webber second.

For anyone less combative that might have been a defining moment, when the momentum swung definitively away from them. But Webber hit back and at a wet Nurburgring, no-one – Vettel included – got anywhere near him in qualifying, and that was the foundation of the breakthrough victory. There was a particular lap in Q2 that just might have been the lap of the season – by anyone. It was his one effort on intermediate tyres and as well as being three seconds faster than anyone else’s at the time, was 1.5s faster than Vettel managed in two attempts. That weekend Webber’s performance was from the very top drawer, one that any of the grand prix greats would have been proud of and one that Vettel ultimately did not

match. No disgrace in that and it emphasises Webber is way too good to be anyone’s number two. Yes, he threw it off in Suzuka practice, making him a non-starter on a weekend where Vettel won from pole. But you could just as easily point to Interlagos where Vettel failed to properly time his run in Q1 and Webber took his second victory.

No two ways about it: Webber will be fighting Vettel hard this year. We know from 2009 that he is good enough to do this, but we might also reasonably assume that was the very minimum we can expect from him, given the compromises that his injury must have imposed. He still has metal in his right leg, and will for another year, but his preparation for the season is way better 12 months on.

“I’m very mindful of who we are competing against. As well as Seb, there’s the German national team down the road [Mercedes], Ferrari and McLaren, all of them potentially very strong. I’m sure I’ll be competitive, just a question of how competitive. I just need to worry about the things I can



Webber’s second win came in Brazilian GP

control, not those I can’t, and see how it pans out. I had a very strong phase in the championship last season [when he lay second to Button and closing, going into the season’s second half] and I’ve just got to keep it going a bit longer this time. The team was awesome last year in how equal they made things between us and they know I’m here to do the business. Having Seb in the other car really lifted my motivation and it’s still the same. I know he’s very young and I’m not 21 anymore, but I’ll do my talking on the track, when it will be all about who can hit those crucial laps and who grasps the implications of the new regulations.”

Those years of struggle, the clock ticking away, while performing to a level way higher than he was being given credit for, have just added to Webber’s tenacity. All underwritten by talent that’s still under-appreciated. He’s approaching his mid-30s now, has a Red Bull contract only for this year – yet still has so much left to achieve. There’s nothing to suggest Mark Webber couldn’t be ‘The New Jack Brabham’, a guy you under-estimated at your peril and who won his third world championship at 40. ❧



Webber with his manager Brieatore and boss Horner

LAUNCH DATE:
FEBRUARY 3
LAUNCH VENUE:
THE INTERNET

VIRGIN VR-01

BY MARK
GLEDENNING

CHASSIS Virgin VR-01

ENGINE Cosworth CA2010

DRIVERS



24

Timo
Glock



25

Lucas
di Grassi

TEAM CEO Graeme Lowdon

TEAM PRINCIPAL John Booth

TECHNICAL DIRECTOR Nick Wirth

TEST DRIVERS Alvaro Parente, Luiz Razia



MISSION STATEMENT

"We are a serious racing team with serious ambitions, so we aren't going to try to run before we can walk"

NICK WIRTH



Di Grassi also took a turn behind the wheel last week



L to r: Di Grassi, Glock and tester Razia with VR-01

No amount of planning, money or influence can save you from sod's law, so it was hard not to feel a bit sorry for Virgin Racing last Wednesday.

By completing its VR-01 the team delivered on its commitment to create the first completely digitally-designed Formula 1 car in history, and in doing so, scored an early goal against the first wave of sceptics. Not only that, but it did it in less than a year, and as a brand-new start-up team. So when it set about arranging a virtual launch for its virtually-designed car, you'd have forgiven it for thinking that the hard work was already behind it. Then the team's technical system melted just as the world tuned in to see the car.

The space on the website that was meant to be filled with the offspring of thousands of hours of work was instead occupied by an 'our engineers are

working on the problem' notice reminiscent of the recorded message that you get when your ISP goes down, sending F1's online community into a twittering frenzy of sadistic glee.

But Virgin had the last laugh — the glitch was sorted quickly, its sharp lines and distinctive tattooed red/orange/black livery well-received by the public (even if the colour scheme does vaguely invoke memories of Midland F1), and it has taken the gong for the first of the new teams to reveal a complete car.

But will it be any good?

THE DEVELOPMENT WAR

Virgin's name might be emblazoned across the rear wing, but the keys to the team's success are located elsewhere — the Wirth Research logo on the rear wing endplate, and Manor Motorsport's white rose symbol, tucked away on the inside of the front wing struts.

ALL PICS: VIRGIN RACING

Glock put initial mileage on the car at Silverstone



With responsibility for the design of the car, Wirth's job is done in one sense, and just beginning in another. The VR-01 has successfully leapt from digital code to physical tangibility, but now begins the task of developing it. Like all cars, the version that heads out of the pits for the first practice session in Bahrain will be markedly different to what was shaken down at Silverstone last Friday, but the challenge that Virgin faces – like all new teams – is matching the development rates of the current teams during the season.

Technical director Nick Wirth believes that his team is up to the task.

"It's really interesting, because the [development] graph is remarkably linear," he told AUTOSPORT.

"You can easily derive the aero performance of the competition from last year, because if you know about the circuits, and assume that the power is

reasonably stable, it's possible to work out roughly what the development rate of various teams is. And then all we can do is hope to God that the development rate that they will show over the winter and into the season isn't higher than

"We will succeed or fail based on the rate of development of the performance of that car"

TECHNICAL DIRECTOR NICK WIRTH

that, and that's our target to shoot at.

"We will succeed or fail based on the rate of development of the performance of that car. Once you hit the track, the rate of development is the most important thing to a racing team. We're gearing ourselves up to do everything

we can to further refine our processes to make sure that once our thing hits the track, we can start developing it at the fastest possible rate."

A SOUND BATTLEPLAN

For a start-up team, the line-up of Timo Glock and Lucas di Grassi is about as strong as could be hoped for. Glock is experienced enough to move seamlessly into a leadership role yet young enough that he still has untapped potential, while di Grassi brings a fair degree of intelligence and desire coupled with a solid whack of speed.

Garage credentials are strong, too. An early-January reshuffle resulted in Virgin executive Alex Tai handing the team principal role to Manor's John Booth – a position he arguably should have held from the start – while Graeme Lowden remains as CEO.

The team claims that the car has been ►

GARY ANDERSON'S TECH FOCUS



The first of the new teams is out of the starting blocks with a very neat CFD-derived package. It's a bold step for any team, let alone a new team with its first design and no real reference data. Overall the car looks tidy, if perhaps a little too simple, but an aggressive development programme should take care of that. For any new team, reliability will be the main concern – it is very important to pile on the miles and get as much data as possible to define the direction of your development programme.

ENGINE COVER

The undercut airbox inlet allows airflow spillage from around the driver's helmet and from the airbox intake at high speed to find somewhere to go without creating too much turbulence, which would affect the rear wing. The engine cover itself looks like it is to the minimum regulation size. It doesn't have the Red Bull-style central fin, and doesn't it look better for it? I wish someone would look at this and write a rule that would eliminate those stupid-looking billboards that run from the engine cover to the rear wing.



NOSE AND CHASSIS

The two-piece front wing's main plane has a very long cord section, so uses up all the plan view area allowed in the rules. The airflow separation will be critical, as it will greatly reduce the performance of the wing. The long nose has Red Bull-style bulges on the upper outer corners to reduce air spillage off the top, which would induce lift.

FRONT WING AND ENDPLATES

The simple front-wing endplates have a forward vertical turning vane and low inner endplate, with the trailing edge curved outward to help turn the air on top of the wing outward past the front tyre rather than around it. This would alter the amount of airflow between the tyre and the chassis, which affects the downforce produced by the underfloor.



ALL PICS: VIRGIN RACING

◀ ahead of schedule right through the design and crash-testing process, and it certainly came together quicker than any of the other start-ups. The engine was first fired up two weeks ago, and Glock shook down the car at Silverstone late last week. It will meet its rivals for the first time at this week's Jerez test.

SPOT THE INFLUENCE

Virgin's pace will inevitably serve as a litmus test for the true value of CFD as a design tool. If the car is anywhere near the pace then Wirth's digital crusade will have been vindicated; if it's within range of scoring points then a lot of other teams will be forced to reconsider their windtunnel programmes.

But few – if any – technical figures in the paddock have expressed any concern that their tunnels are about to become redundant, with the popular wisdom being that CFD will be useful in getting the car to a certain point, but refining it beyond that will be difficult without resorting to more conventional simulation tools. The stopwatch will be the final judge.

As will probably be the case right through the grid, the front of the VR-01 takes a few cues from last year's Red Bull RB5. The defining feature – at least, of the launch version – is the aggressively-raked nose, while the rear has the new-for-2010 swollen waist to accommodate sufficient fuel to last a

Simple design will need aggressive development



DIFFUSER

We've really not seen a lot of diffusers this year, so it's nice for a new team to show that it really is still a sport and allow us to see the complete car as a whole. This package is to the maximum height and width, with only one splitter down to the reference plane at the maximum regulation width of 250mm from centre line. The main diffuser characteristics change with ride height, and airflow separation is inevitable when the car is low to the ground. More splitters can control this and reduce the overall effect.



SIDEPODS

The aggressive undercut at the front corner of the sidepod then reduces to almost nothing midway along the sidepod. This is to house the cooling requirements, but normally it is better to continue this undercut as it stops the airflow coming around the sidepods from being sucked into the underfloor, reducing its overall performance.

race distance. The specifications released by Virgin indicate a fuel capacity "in excess of 200 litres", which is in keeping with the figure of 220 litres bandied around by some teams.

The job of making the car noisy has been entrusted to Cosworth's CA2010, the engine that heralds the company's return to Formula 1 after a three-year break. The same unit has been earmarked for Williams, as well as the other three start-up teams. Early indications from Williams in testing have suggested that the Cosworth might be some way from the top of the list in terms of horsepower, but if 10 cars on the grid have the same engine then there's more than enough

scope for a private battle between the 'Cosworth class'.

Teams are virtually unanimous in their belief that the outcome of the 2010 season will be heavily determined by who has managed the most clever interpretation of the diffuser rules. Wirth has hinted that Virgin's approach in this area could be quite different to many of its rivals, but just how radical will only become apparent with time.

By getting a car finished and on to the track, Virgin has passed the first test. The line-up is good, the racing pedigree within the team is strong, and the car looks the part. Now we just have to wait and see whether there is substance as well as style. **X**



STRENGTHS

The start-up team's structure is excellent. Booth's credentials in lower categories is impeccable, and there is no reason why it won't translate onto a larger stage. Glock's solid pace and even temperament makes him a good choice as team leader for a new squad, and di Grassi is one of the grid's most highly-rated rookies.



WEAKNESSES

There's a notable lack of real sponsors. Virgin is thought to be sufficiently well-funded for the short-term, but it needs more support to move forward. On the technical front, how will the team be able to recover if the all-CFD gamble backfires?

MARK HUGHES' FINAL WORD



Like all the new teams, Virgin should be welcomed with open arms into F1. But it has a huge challenge on its hands to get within sniffing distance of the tail end of the established teams. It has a strong engineering core and John Booth is a savvy operator, but from start-up to F1 grid, with nothing like the resources of most teams, in just a few months, is a momentous ask. It's going to be especially interesting to see how Nick Wirth's CFD-only design fares. He's used the same technique to create a successful sportscar

but the airflow around an open-wheeler is vastly more complex, much more demanding of computing power that is still only on the edge of being able to do this. The realistic aim must be respectability, to have a car that has no major vices, even if it's still some way from cutting-edge in its aero performance. The team needs a basis to operate at a good professional level. It has a good pair of no-nonsense drivers, Glock a guy that just gets stuck in and gives his all, di Grassi bright, level-headed and with a good depth of technical understanding.

Big interest surrounds CFD-only Virgin design



LAUNCH DATE:
FEBRUARY 1
LAUNCH VENUE:
VALENCIA

FORCE INDIA VJM03

BY EDD STRAW

CHASSIS Force India VJM03
ENGINE Mercedes-Benz FO108X

DRIVERS



14

Adrian
Sutil

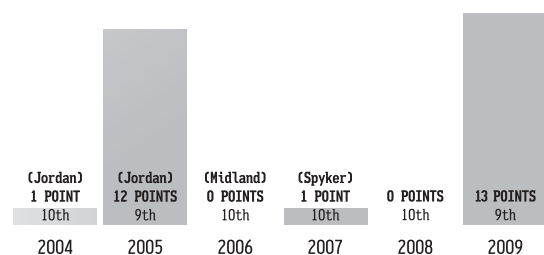


15

Vitantonio
Liuzzi

TEST DRIVER Paul di Resta
TEAM PRINCIPAL Vijay Mallya
CHIEF OPERATING OFFICER Otmar Szafnauer
TEAM DIRECTOR Bob Fernley
TEAM MANAGER Andy Stevenson
DESIGN DIRECTOR Mark Smith
TECHNICAL DIRECTOR James Key
HEAD OF AERODYNAMICS Simon Phillips
RACE ENGINEERS Bradley Joyce (Sutil) & Gianpiero Lambiase (Liuzzi)
CHIEF RACE ENGINEER Dominic Harlow
CHIEF MECHANIC Andy Deeming

CONSTRUCTORS' POINTS 2004-09



MISSION STATEMENT

"We can show that last year wasn't a one-off and keep moving forwards. We want to consolidate on what we achieved in 2009"

MARK SMITH, DESIGN DIRECTOR



Last August, something amazing happened to Force India. Giancarlo Fisichella took the team's first pole position, and but for an early safety car he would surely have taken its first win. That was the start of a glorious run for the ex-Jordan/Midland/Spyker team in which it established itself as a credible points contender. Reaching the heights of Spa again this year is optimistic, but Force India has a very clear target in 2010 – to consolidate its place as a top-10 runner and prove that its form was more than a flash in the pan.

There's no reason why it shouldn't. Despite still being a small team, it is enjoying stability unknown since the glory days of Jordan. Now in the second year of its 'technical partnership' with McLaren-Mercedes, there will be no rush job to install a new engine and no last-minute test debut for the car,

despite missing last week's opening session at Valencia. The signs are good, but nobody in the team expects Spa-esque performances. Instead, a good consistent points-scoring season and a place in the middle of the constructors' championship will do nicely.

"We don't look at Spa and Monza and think that is where we should be," explains design director Mark Smith. "After those races, we were back to where we really were performance-wise and we want to pick it up from there. I wouldn't dare predict where we will be, but I'd like us to move on."

Moving on is the big challenge for Force India this year – but it won't be easy. If it can keep pace with the development of the big teams, team owner Vijay Mallya's hopes of being in a position to fight for a podium in next year's inaugural Indian Grand Prix might not be a mere pipedream.



The VJM03 will carry the small team's hopes

TEAM COMING OF AGE

You only have to glance at Force India's multiple identities over the past half-decade to get an idea of the tumultuous recent history of the team that won four races as Jordan from 1998-2003.

Despite problems filing its accounts with Companies House on time (the team insists that this will be done by the end of the month, and could find itself in serious trouble if it doesn't) it is now a more stable ship than it has been for some time. That said, it sailed some pretty stormy waters in the first decade of the 21st century.

"We are seeing quite a steep rise in the benefit of that stability at the moment, and also with working with McLaren-Mercedes as a partner," says Smith. "That relationship is very stable and we are benefiting in terms of the performance of the engine and the gearbox, whereas

historically this team has had a lot of engine changes."

The switch from Cosworth to Mercedes via Toyota and Ferrari since 2004, and the team's chameleonic identity, are signs of an often hand-to-

"We don't look at Spa and Monza and think that is where we should be"

DESIGN DIRECTOR MARK SMITH

mouth existence. But now Force India cannot accept the odd point here and there as good enough. Don't expect wins this year, barring a repeat of the Belgium miracle, but it's perfectly reasonable to expect regular points.

"I would like us to demonstrate that

we're a capable team," says Smith. "We've already got a solid engineering crew, so we can show that last year wasn't a one-off and keep moving forwards. We want to consolidate on what we achieved last year."

IT'S NO 'MINI McLAREN'

Force India wasn't given the credit it deserved for the strengths of its 2009 car. Despite the McLaren affiliation, it was no 'mini-McLaren' — the relative performance disparity between the two cars at Spa last year proves that. That said, the common gearbox means that Force India might well have drawn similar conclusions about the double diffuser design.

Last year's car was strong on the fast circuits — aero efficient and good in the fast corners — but it lacked downforce in the slower stuff. The challenge now is to improve this weakness without ►

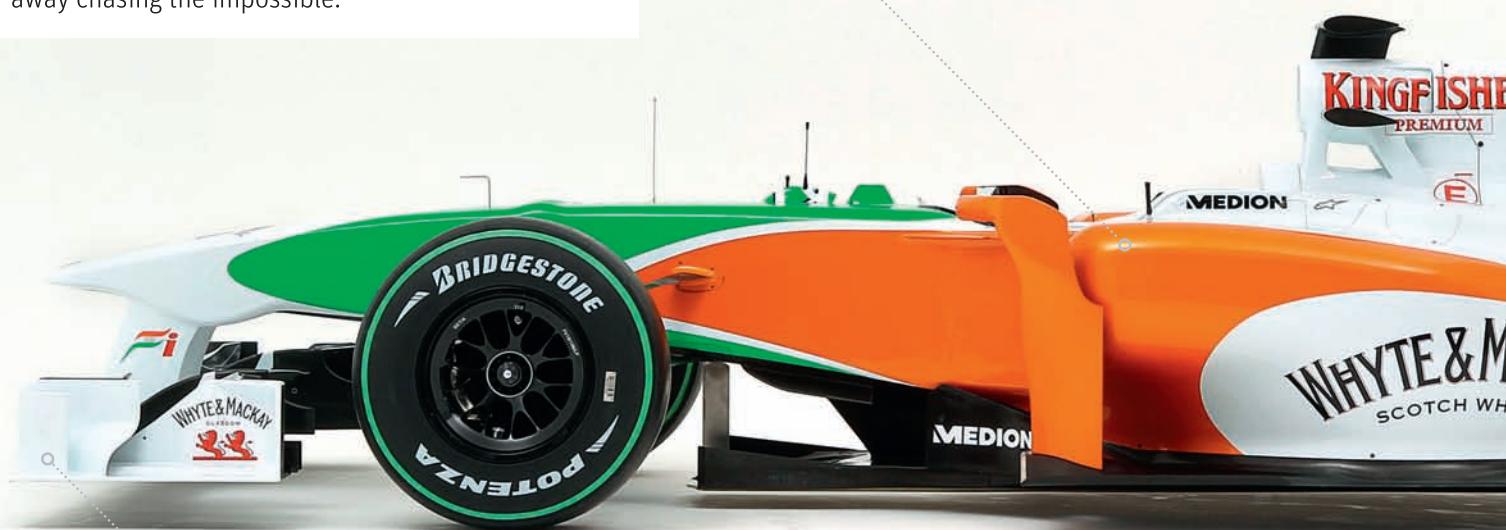
GARY ANDERSON'S TECH FOCUS



On a few occasions last year, this team was a 'force' to be reckoned with, but it didn't happen often enough. Its car was good on the lower downforce circuits but fell away at the higher downforce tracks. Each circuit has a minimum efficiency level – better this and you go faster; more downforce at the same efficiency and you stay at the same lap time, or make it worse and you go slower. This is the area that they need to look at because on some circuits they got it right but at others they were miles away. Sutil also needs to stop being an accident magnet. He is very capable but sometimes as a driver you have to accept what is possible instead of throwing it all away chasing the impossible.

SIDPODS AND MIRRORS

The radiator inlet is interesting. The upper section of the inlet duct has a raised section and a removable access panel just behind it. The saw-tooth vortex generator mounted on the cockpit side is to create a vortex on top of the leading edge of the sidepods. This will reduce the lift created as the front-wing airflow wake comes over this surface. The rear-view mirrors are neatly integrated into the top of the vertical turning vanes on the outside front corner of the sidepods. Mounting them here reduces turbulence that can affect rear-wing performance.



FRONT WING AND ENDPLATES

The two-piece front wing has a forward upper two-piece winglet. This can produce more downforce but it's more difficult to control airflow separation. There are two vertical splitters under the main plane to help control this. The endplates have forward-mounted turning vanes to help the airflow around the front tyre.

◀ compromising its strengths. "This is exactly what we're trying to do," says Smith. "We never set out to have a car that had sufficiently low drag to have a disproportionate level of performance on low-drag circuits – it was just how the car was. It was an efficient car aerodynamically and what we have this year still reflects that, but work has been put into improving it across the majority of tracks. We have been wary of diverting significantly from where we were, but we are aware that we need to pull the performance up over a bigger range of circuits."

COMPUTING BOOST

With windtunnel time restricted,

computational fluid dynamics technology is becoming ever-more important. Force India hasn't got a Sauber-style supercomputer rattling away in its basement, but it does have access to the Computation Research Laboratories' facility in India.

Technical director James Key reckons this is the biggest boost that the team

**"Our CFD capability
was tiny compared
to the competition"**

TECHNICAL DIRECTOR JAMES KEY

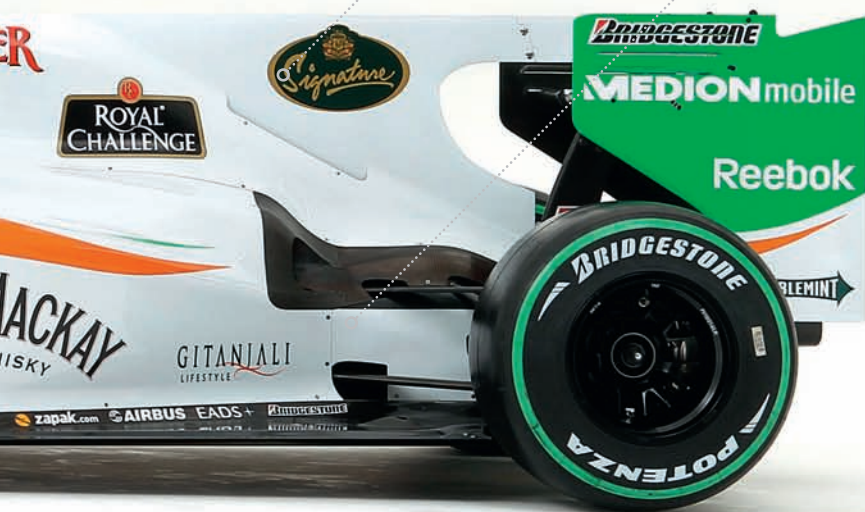


ENGINE AND GEARBOX

Along with the Mercedes engine, Force India uses a McLaren gearbox, hydraulics and control system electronics. With this complete unit there needs to be reasonable transfer of information. The gearbox more or less defines the rear-end layout and the suspension geometry will be very similar to the McLaren. Force India has the same opportunity to create a dramatic double diffuser, but it might have been sensible and created a package that will be a little more robust when it comes to the engineers getting the best out of the car during a race weekend.

AIRBOX AND ENGINE COVER

The undercut airbox inlet is different to the others in that the rollover bar is mounted on four stalks. This allows airflow spillage from around the driver's helmet and airbox to re-attach itself to the sides of the engine cover without creating too much turbulence. The engine cover has the central fin to keep rear-wing performance mid-corner.



P42 INTERVIEW: VITANTONIO LIUZZI

has received over the winter. "Our CFD capability has been tiny compared to the competition, and now we've got a deal to use a large computer in India that is operated directly from Force India in the UK," says Key.

"Having that didn't impact on us at all in 2009 because it was only set up at the end of the year, but it's probably the biggest difference we have in 2010. That process will ramp up over the year and will stand us in better stead."

Technical competency aside, it would be a mistake to characterise Force India as anything other than a minnow for the forthcoming season. Even with the CFD boost, it will be down to the technical team to ensure that the right

avenues are explored and that effort is not wasted going down blind alleys.

"The big teams have more resources than we do at the moment," says Smith. "We might not have the luxury of being able to pursue two or three parallel paths of development, so it's far more important that we head in the right direction. We did that last year and we need to repeat that. If we do so, we have demonstrated that our rate of performance increase can be as good as anybody."

After half a decade rooted at or near the bottom of the constructors' championship, now is the time when Force India must prove it can match up to the rest. **M**



STRENGTHS

The best engine in Formula 1 and some McLaren know-how (not to mention the use of its simulator), plus an aero department that showed last year that it can maintain a good pace of development and vastly improved CFD capability.




WEAKNESSES

Still a minnow, Force India doesn't have the resources of the big guns. Its driver line-up still has something to prove, although both are capable of regular points finishes, and despite Vijay Mallya's confidence, the team's financial situation is still disquieting.

MARK HUGHES' FINAL WORD



 Force India's performance was one of the revelations of 2009. Its aero group did a brilliant job with what was at its disposal to produce a car that was genuinely quick by the season's end, particularly on low downforce tracks. The competitiveness of that car was disguised in the early season by how late the Mercedes engine deal came together. So with a much more settled run up to 2010, there's nothing to suggest the little team couldn't be showing form much earlier this time. The technical and resource

restrictions of the new era of F1 are having the effect of bringing the challenge within reach once more of smaller teams. It's probably not going to be winning races, but it may well emphasise what is likely to be a significant difference between an established small team and the new entrants. On the driver front, Adrian Sutil's pace was becoming more consistent by the second half of the season, while Tonio Liuzzi finally has a settled berth in what should be a good car. He must now unlock his potential, especially with a third driver of the calibre of Paul di Resta.

Sutil needs to avoid going back to moments like this



Slow starter is *quick to learn*

Vitantonio Liuzzi has been slow to make an impression on F1. But is it too soon to write off Force India's new star? *EDD STRAW* finds out

Michael Schumacher needed only a couple of qualifying sessions to mark himself out as a superstar. Lewis Hamilton took just one corner to impudently pass reigning champion Fernando Alonso and herald his arrival. And even in a mediocre Toleman, Ayrton Senna stamped his first indelible mark on Formula 1 with his sensational drive in the wet at Monaco on only his fifth start. The greats have a habit of grabbing you by the throat and shaking until even the most committed doubters have to accept that they are something special. And they rarely take long to do it.

Vitantonio Liuzzi hasn't managed that in his stop/start grand prix career. Yet. With 44 grands prix starts, surely he has had the chance to show whether he is anything more than simply a decent F1 driver? But even at 28, we haven't seen enough of Liuzzi to draw any definitive conclusions. Many in the

paddock reckon he's a good driver — no more, no less — and based on the bulk of the data that's an understandable conclusion. But there's a problem that nags away in the back of your mind every time you're tempted to close the book on Liuzzi. Speak to people who have worked with him, well-respected people who have worked with more than their fair share of top drivers, and there are some who regard him as one of the best in the business.

Does this mean that he is? Not necessarily. Does it mean that he might be? Maybe. Does it mean that he's a driver to watch very closely in 2010? Definitely. Liuzzi is a riddle, wrapped in an enigma, inside a mystery in the form of a laid-back, take-him-as-you-find-him Italian. For better or worse, the puzzle will be unravelled during the coming season with Force India. For good measure, he's got very highly-rated third driver Paul di Resta, who is being groomed as a race driver of the

future, breathing down his neck. Now is Liuzzi's chance to shine.

Mick Cook engineered the Italian to a dominant F3000 title in 2004 with now-Red Bull team principal Christian Horner's Arden International. He certainly reckons that Liuzzi is capable of great things at the top level.

"I've worked with Juan Pablo Montoya, Ricardo Zonta and Tomas Enge [and Heikki Kovalainen], but Tonio always impressed me as being probably the best one," says Cook. "With Montoya, he always wanted to make the spectacular passes, whereas Tonio was the one who was prepared to win the race with no fuss at the slowest possible speed. I'm surprised that he hasn't yet made any bigger impression in F1 because we rated him so highly.

"Force India is his last chance, and I think he realises that. He stands a better chance at Force India than at Toro Rosso and he will be more focused now. I think he will be okay ►





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Liuzzi was a distant 14th in the Japanese GP

INTERVIEW VITANTONIO LIUZZI



DOMINIC HARLOW FORCE INDIA CHIEF ENGINEER

Q What is your early impression of Tonio?

He's laid back, works hard and has been a great addition to the team. And from what we've seen he can be fast; he just needs the chance to show what he can do because he hasn't had the best of opportunities. Being third driver is a pretty thankless task, but he handled being put into the car at the end of last season with little testing very well. Going into this year, he will have a proper preparation and we expect him to show what he can do. In his Toro Rosso days, it was a tough situation and this provides him with a better opportunity to show what he can do.

Q Are you still waiting for him to show the star quality that some people talk about?

We've all seen drivers that have great seasons in some formulas and not in others, so we just look at what he has done for us. We have

seen a lot of promise in his work as third driver and in his performance at Monza last year. Circumstances haven't particularly been in his favour, but we are working to change that and to let him deliver his best.

Q What is his approach like?

He's been around motorsport since he could walk, so he's very savvy. At Monza, he understood his own approach, built him up and kept getting better with every run. It's a great shame that the car let him down in the race.

Q How is his technical feedback?

That's an area where Tonio is strong. As third driver, you can learn a lot. Because he loves motorsport he has been able to watch and learn, make suggestions and get involved on the technical side. That's what makes a third driver a good asset rather than just sitting in the motorhome looking bored!



Things didn't go well for Liuzzi with Toro Rosso

◀ because he has got that talent – and you'd think it would show through."

Liuzzi's confidence is high and he also claims to be a more focused driver than he was in his Toro Rosso days.

"I don't see it as a *last* chance, I see it as *another* chance," says Liuzzi. "You are always under the spotlight in F1 and you have to perform. People have realised my speed, and this is a chance to make a strong statement about my career. It will be a completely new world after two years in a test role. I am much more focused and I'm prepared physically and mentally. I'm a different person to what I was two-and-a-half years ago. I'm approaching the championship with a different mentality and the environment is completely different. I really feel that it could be a different Tonio."

This idea of a new Tonio is rooted in the tumultuous start to his F1 career. He was on the brink of a Red Bull-assisted Sauber seat in 2005 before finding himself with a share in a seat

at the energy drinks giant's own team. Christian Klien started the season, and Liuzzi had only four races to impress. He passed Michael Schumacher on the first lap of his grand prix career and scored a point in the San Marino Grand Prix, but struggled to impress in subsequent races as he was distracted by Red Bull making significant changes to the car, most notably to the weight distribution. There were no more race outings for the driver that year.

Liuzzi was then given two years with the newly acquired Scuderia Toro Rosso. But despite showing very well against Sebastian Vettel, who had replaced Scott Speed, in the final seven races of the 2007 season, he was flicked in favour of Sebastien Bourdais for 2008. STR certainly wasn't a happy ship, with mutterings of tension between the Red Bull side and co-owner Gerhard Berger. Conforming to a "party team" image, Liuzzi found himself labelled with the wild-man tag that doesn't sit well with his character.



STRIKE RATE
Liuzzi shares the record for most FIA F3000 Championship race wins with Nick Heidfeld and Juan Pablo Montoya. He won seven races in 2003-4, winning the title in his second season, and has the best strike rate of the table toppers after starting two fewer races.

Now out of the Red Bull family, he ended up as Force India's tester. Giancarlo Fisichella's move to Ferrari put Liuzzi back into racing at last year's Italian Grand Prix, where he excelled. He would certainly have finished fifth, and might even have nicked third with luck on his side. Eyebrows were raised – with no testing it was a brilliant performance. Then, in the final four races, Liuzzi's performances were solid, if not spectacular. That was partly down to the edge of conservatism of a driver who had been labelled a crasher, but it seems the very physical driving style required of the Force India car at that stage of the season was at odds with his precise driving style.

"I was a bit disappointed that I didn't get points in the last few races," says Liuzzi. "We had bad luck in Brazil – aquaplaning in qualifying – and in Suzuka we were strong. But for me it was important to show that when the car is performing, I am able to bring it home. It was a good warm-up." ▶

◀ Liuzzi knows that what he does this season – and chances are in the first half of the year – will dictate whether he can reverse the perception of him not being a top-liner, and strike from the record the damage done during his STR days. Peter Collins, Liuzzi's manager for a decade after he was impressed with the Italian's stunning race performances for the CIG kart team (he won the world karting championship in 2001), believes this is Liuzzi's priority.

"Tonio's biggest problem is that to most people in F1, perception is reality," says Collins. "It takes time to change perceptions and that's what he needs to do this year with his performances."

"He was very disappointed not to

view on Tonio. Some believe he's a waste of time while others think there's a lot of talent in there. I'm in the latter camp, obviously."

Whether they're in the pro- or anti-Liuzzi camp, some people will never change their perception. But the fact is, the jury is still out on Liuzzi for a very good reason. There is clearly a lot of ability there, but the question is can he harness it? If he can, he could be a star. If he can't, he'll just be another Jan Magnussen. But one thing is certain – Liuzzi doesn't buy into the view of him being unable to translate his talent into F1. He clearly feels that he hasn't yet had the chance to shine.

"I don't think that is the right analysis," says Liuzzi. "If Fernando

"Force India is Liuzzi's last chance, and I think he realises that. He will be more focused now"

Mick Cook, Arden International

be racing in 2008 but we needed a completely fresh environment to erase the last two or three years and start from scratch. The time between the end of Toro Rosso and when he started racing again was a tremendous time for Tonio because he understood how much he wanted to succeed, his hunger grew and he worked hard out of the car.

"A lot of people don't take the time to look at things and accept the perception. The perception with Tonio, unfortunately, is that he's not serious. That's why there is such a polarised

stayed with Minardi, he would not have become a world champion. You have to analyse the whole career. I have been with teams that have been good to me, but which had just been born. I was part of the development of the team and car. But my speed always showed..."

The only conclusion you can safely draw right now is to keep a close eye on Liuzzi. One way or another, 2010 will be the season that the questions surrounding him will be answered. And if they aren't, chances are they never will be. ☒



Di Resta will be breathing down Liuzzi's neck in 2010

WAITING IN THE WINGS

PAUL DI RESTA

THE MAN who beat Sebastian Vettel to the F3 Euro Series crown already has half a hand on a 2011 Force India drive. And there's no question that 2004 McLaren AUTOSPORT BRDC Award winner Paul di Resta has what it takes to cut it in F1. As a first step, he will be given runouts in the first free practice session of grand prix weekends this year, although which races has yet to be finalised. This should make comparing his speed with Force India's regular drivers somewhat easier, and allow him rare seat time in an F1 car.

"We've got a clear path and a goal we'd like to achieve," says di Resta, whose route to F1 was fogging up before he was given a Force India test at Jerez last December. "It's a case of ticking the boxes. We did the test and everything went well, so hopefully we can build on that and turn it into a race drive in the future."

"The team has two race drivers, so my job is test and reserve driver. But we're going to be driving on Fridays and should I need to stand in, I'll have to be ready for that."

The Scot's CV is impressive. A karting standout, he is a racewinner in Formula Renault UK and the DTM on top of his F3 success, and every time he has jumped in an F1 car – be it for McLaren or Force India – he has been quick. But he was in real danger of getting stuck in the DTM after three seasons excelling in the German-centric touring car series.

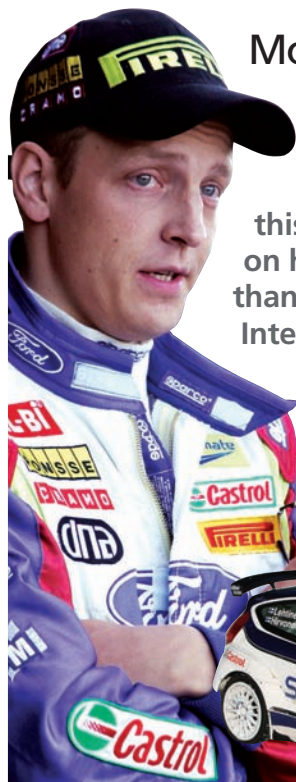
"I'd have kept fighting all the way through my racing career because F1 is what I want to achieve, and I'd never have given up until I got it. Now we just have to wait and see what circumstances arise," says di Resta. "I'm just thankful that this deal has come together, and that we're in the door."

Keep your eyes on the Scot on Fridays. Soon Dario Franchitti might be known as his cousin, rather than the other way round.



Liuzzi starred at Monza but was denied points

HIRVONEN CLOSES THE GAP ON LOEB



Monte Carlo victory sends Finn flying up the Castrol Rankings

Mikko Hirvonen will be taking the fight to Sébastien Loeb in the World Rally Championship this year, but he's already closing in on his rival in the Castrol Rankings thanks to a great performance in the Intercontinental Rally Challenge. The 29-year-old led the Monte Carlo Rally from start to finish, giving him a win on the Ford Fiesta S2000's IRC debut. The result pushes Hirvonen up to fifth in the Castrol Rankings.

Hirvonen scored heavily in January's Monte Carlo Rally

Castrol Rankings CURRENT STANDINGS			
1	◀	Jenson Button	F1 21,828
2	◀	Sebastian Vettel	F1 20,599
3	◀	Sébastien Loeb	WRC 18,932
4	◀	Rubens Barrichello	F1 18,788
5	▲	Mikko Hirvonen	WRC 18,155
6	▼	Jimmie Johnson	Sprint Cup 17,773
7	▼	Mark Webber	F1 17,624
8	▼	Ryan Briscoe	IndyCar 17,463
9	▼	Dario Franchitti	IndyCar 17,191
10	▼	Scott Dixon	IndyCar 16,805

DATA CORRECT AS OF 8 FEBRUARY 2010

ON THE MOVE...

Mikko Hirvonen wasn't the only big mover this month. Countryman Jari-Matti Latvala has also climbed into the Top 40, moving up three places to 38th. Meanwhile, lower down the rankings another big mover was **Sprint Cup** driver **AJ Allmendinger**, who enters the Top 100 with a move of eight places from 102 to 94th, while **IndyCar** driver **Ryan Hunter-Reay** is up 12 to 80th. **NASCAR** driver **Kevin Harvick** goes up a place to 53rd after winning the Budweiser Shootout for the second consecutive year, as does **Davide Valsecchi** (to 82nd) after his **GP2** win in Abu Dhabi. However, there were mixed fortunes for the Norwegian Solberg family in the **WRC**. While **Petter** climbed 13 places to 67th, brother **Henning** dropped six places to 55th. Other significant fallers were **US Grand Am** stars **Alex Gurney** and **Jon Fogarty**, down nine places to joint 84th.



AJ Allmendinger has climbed into the Top 100

Castrol EDGE

Performer of the Month

Mikko Hirvonen takes the first ever Castrol EDGE Performer of the Month award. **Predict February's Performer of the Month online**, for a chance to win exclusive team prizes.



1,547 As of 8 February 2010, which British former Formula 1 champion was ranked 1,547th overall?

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	Silverstone	16-18 April
	Marrakech	30 April-2 May
	Monza	21-23 May
	Zolder	18-20 June
	Algarve	2-4 July
	Brands Hatch	16-18 July
	Brno	30 July-1 August
	Oschersleben	3-5 September
	Valencia	17-19 September



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INTERNATIONAL RACES & RESULTS

GP2 Asia Series

Yas Marina (UAE)

QUICK RESULTS

- Pole **Charles Pic**
- Race 1 **Oliver Turvey**
- Race 2 **Davide Valsecchi**

RACE RATING

★★★★★

Wheel-banging, mega passing moves and some surprising performances

REPORTS WORLD OF SPORT



Valsecchi made it past Herck late on

STALEY/LAT

GP2 ASIA SERIES YAS MARINA (UAE), FEBRUARY 5-6, RD 2/4

Double Dhabi winner for iSport

The GP2 Asia Series is only halfway through its season, but Davide Valsecchi already has one hand on the title. The iSport driver picked up a win and a second place at Abu Dhabi's Yas Marina circuit to mirror his results from the opening round and establish a massive 19-point championship lead.

Under the floodlights at Formula 1's newest track, Valsecchi ran wheel-to-wheel with team-mate Oliver Turvey for feature-race honours. During a three-lap period following the mandatory pitstops, it was an enthralling contest. Turvey led from the start after out-dragging Arden polesitter Charles Pic off the line. Valsecchi had also passed the Frenchman, but

pitted a lap earlier than Turvey and thus had his tyres up to temperature when the Brit rejoined following his stop.

Using his superior grip, Valsecchi was able to draw alongside Turvey down the long back straight. They gently banged wheels running side-by-side into the following left-hander, with Valsecchi coming out just ahead.

But Turvey was not to be denied a maiden GP2 win, as Valsecchi was instructed to let him back ahead: "The team said maybe it was a bit incorrect, so I let him past again." At the same time, ART debutant Jules Bianchi pulled a smart move on series veteran Javier Villa — who was making his first start for Arden — for third.

But Bianchi couldn't take the fight to the leaders, and iSport duly notched up its first one-two finish. Luca Filippi charged (and barged) his way to fourth, but the Italian was denied the result his drive deserved when his Meritus car ran out of fuel on the last lap. This moved Villa up a spot and put Giacomo Ricci up to fifth after a fine run for DPR.

Teenager Alexander Rossi produced a brilliant performance to take sixth after being put to the back of the grid following a Meritus front-wing irregularity, while Michael Herck was fortunate to claim seventh after his DPR car ran dry on the slowing down lap. He'd also survived a wheel-banging incident with Marcus Ericsson that put the Super Nova driver out and handed eighth, and the sprint race pole, to Max Chilton on his first outing for Ocean.

Chilton's time at the front in race two was short-lived as Herck, Rossi and Ricci shot by. Ricci soon disposed of Rossi to create a shock DPR one-two. With Villa and Bianchi starting from the pitlane after

stalling on the dummy grid, the way was cleared for Valsecchi and he was soon up to third.

Valsecchi pulled a great move around the outside of Ricci, and broke Herck's heart two laps from the end when he sliced down the inside of him for the lead. Second and third was still a brilliant result for DPR.

Addax's Sergio Perez took fourth, just ahead of Turvey, while Chilton held on for a point in sixth, just ahead of Bianchi, who gave his main-series rivals something to think about with a superb charge to seventh.

● Abdullah Al-Burj

RESULTS

Race 1 1 Oliver Turvey, 33 laps in 1h04m55.310s; 2 Davide Valsecchi, +0.618s; 3 Jules Bianchi; 4 Javier Villa; 5 Giacomo Ricci; 6 Alexander Rossi; 7 Michael Herck; 8 Max Chilton; 9 Sergio Perez; 10 Josef Kral. **Race 2 1 Valsecchi**, 21 laps in 41m00.556s; 2 Herck, +1.969s; 3 Ricci; 4 Perez; 5 Turvey; 6 Chilton; 7 Bianchi; 8 Charles Pic; 9 Rossi; 10 Vladimir Arabadzhiev. **Points** 1 Valsecchi, 35; 2 Turvey, 16; 3 Rossi, 10; 4 Christian Vietoris, 9; 5 Luca Filippi, 8; 6 Kral, 8; 7 Ricci, 8; 8 Herck, 7; 9 Bianchi, 6; 10 James Jakes, 6.

IN BRIEF



HARRELSON/CTV

ARCA REMAX SERIES

Danica Patrick (above) finished sixth on her stock car debut at Daytona, despite a spin in her JR Motorsports Chevrolet early in the race. Former Renault F1 driver Nelson Piquet Jr qualified an impressive seventh in his Eddie Sharp Racing Toyota, but was eliminated in a late pile-up and was classified 27th overall. Bobby Gerhart, 51, won the race, taking his sixth ARCA win at Daytona in 12 years.

ANDROS TROPHY

Skoda driver Jean-Philippe Dayraut put the icing on the cake of his second successive Andros Trophy title with his seventh maximum score of the season at Clermont/Superbesse. Dayraut finished one second ahead of his team-mate Olivier Panis, while Didier Thorat made it into third in his Toyota Auris. Alain Prost was only ninth in his Dacia Duster, but that was still enough for him to seal the runner-up spot in the championship, ahead of fellow ex-F1 racer Panis.

TOYOTA RACING SERIES

Estonian Sten Pentus (below) won the historic New Zealand Motor Cup by dominating the feature race at Hampton Downs on the series' first visit to the circuit. The Formula Renault 3.5 midfielder beat his Giles Motorsport team-mate, 15-year-old Mitch Evans, who had won the first of three races from pole position. Andrew Waite (ETEC Motorsport) won race two from former A1GP and GP2 Asia Series racer Earl Bamber (Triple X), who is tied with Pentus for second place in the standings, 25 points behind Evans.



GP HAWK BLOW



Turvey broke GP2 duck in race one

STALEY/LAT

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QUICK RESULTS

→ Winner **Kevin Harvick**
→ Pole **Carl Edwards**
→ Most laps led **Edwards**

RACE RATING

★★★★★

New rules spiced up the racing,
but also caused more accidents



Not even Stewart (14) could stop Harvick (29)

LAT SOUTH

NASCAR BUDWEISER SHOOTOUT DAYTONA (USA), FEBRUARY 6

Brilliant Harvick leaves rivals feeling sick at Daytona

When it comes to winning at Daytona, Kevin Harvick possesses immaculate timing. He scooped the 2007 Daytona 500 with a last-gasp move under the lights, and once again relied on his uncanny knack of being in the right place at the right time to win his second straight Budweiser Shootout last Saturday night.

Harvick, who hasn't won at Sprint Cup level since the same event last year in his Richard Childress Racing Chevrolet, missed both practice sessions due to illness but "felt good" when he woke on raceday. Those sessions featured multi-car pile-ups, as drivers struggled to come to terms with rule revisions that included bigger restrictor plates and relaxed attitudes to bump-drafting. Harvick's primary car was wrecked in one of these (driven by Cup team-mate Clint Bowyer) so he won in the spare.

From the outside of the front row on the randomly-drawn grid, Harvick had nothing for Carl Edwards (Roush Fenway Ford), who led every yard of the first 25-lap segment prior to the 50-lap main event.

Edwards was usurped soon after the restart, as Jamie McMurray (Earnhardt Ganassi Chevy) and then Tony Stewart's Stewart-Haas Chevy powered ahead, but Edwards battled back to lead through a crash-punctuated sequence of events. First, Kurt Busch's Penske Dodge was clipped into a wild ride across the grass, and subsequently the wall, by an apologetic Mark Martin (Hendrick Chevy).

"I've spent more time in the ambulance this week than I have in the race car," Busch grizzled, having also been caught in one of the practice wrecks. The second caution was for a spinning Jeff Burton (Childress Chevy), who was hit by

Kyle Busch's Joe Gibbs Toyota at Turn 4.

Harvick hit the front for the first time with 29 laps left, which was the start of the end for Edwards' hopes. Once deposed he was hit by Juan Pablo Montoya in the Earnhardt Ganassi Chevy, and fell to 16th.

Harvick had no shortage of challengers, with Stewart, McMurray, Denny Hamlin (Gibbs), Brian Vickers (Red Bull Toyota), Kasey Kahne (Petty Ford) and Greg Biffle (Roush) filling his mirror. But the key to his success came at the last restart.

After Michael Waltrip's self-run Toyota was punted into the backstretch wall by Stewart's team-mate Ryan Newman, most drivers stopped for two fresh tyres while Biffle and Kahne rolled the dice by staying out. Biffle chose the outside lane for the restart, and Harvick — who'd been strong on restarts all night — powered past both Biffle

and Kahne on the inside approaching Turn 1. He was still in front when the final yellow was called a few moments later, as Biffle's grip-deficient car (he thought he had a flat right-rear) was barged from behind by Jeff Gordon (Hendrick) in the middle of Turn 3, sparking a monumental pile-up that included Edwards, team-mate Matt Kenseth, Newman and Martin.

"When Biffle chose the top, I knew it was going to be up to me to get a good restart," said Harvick. "I needed to roll right up to his bumper, and time it perfectly. I was able to get underneath him with the momentum we carried into Turn 1. I knew if I led into Turn 3, I'd be in better shape because I had [fresh]

tyres and they didn't."

It was mooted that the race should end under green conditions, and be restarted. McMurray, who finished third behind Kahne, said of that idea: "We'd have just kept wrecking!"

Despite a poor-handling Toyota, Kyle Busch dodged both his brother's crash and the final shunt to finish fourth, ahead of Gibbs team-mate Hamlin.

● Chuck Bradbury Jr

RESULTS

1 Kevin Harvick (Chevrolet Impala), 76 laps in 1h18m48s; 2 Kasey Kahne (Ford Fusion), +0.538s; 3 Jamie McMurray (Chevy); 4 Kyle Busch (Toyota Camry); 5 Denny Hamlin (Toyota); 6 Jeff Gordon (Chevy); 7 Joey Logano (Toyota); 8 Brian Vickers (Toyota); 9 Tony Stewart (Chevy); 10 Juan Pablo Montoya (Chevy).



Edwards (99) got caught in late pile-up

LAT SOUTH



EXCLUSIVE

KIMI RAIKKONEN'S

RALLY DIARY

The Formula 1 champion-turned-world rally rookie kept a diary for AUTOSPORT on his first outing for Citroen in Finland



The Finn is comfortable in his new surroundings

Thursday January 28 1200
Mantyaara service park, Finland

Shakedown: my first proper day with Red Bull in the Citroen C4 WRC. Before this, I've done some testing in Finland but now we arrive at a real rally for the first time. The Arctic Rally is an event I have done before, in a Fiat Punto Super 2000 last year, so I am a little bit

familiar with the roads. That will help, but it's not such a big help as the Citroen I am driving this year is so different. There's more power, better suspension and more things that you can adjust. This car is just a step up in every way. The weather is what I expect from the Arctic Rally: arctic. The temperature is about -20C, normal for this time of year.

Thursday January 28 1600
Mantyaara service park, Finland

The shakedown for the rally was good. I went through everything I wanted to do with no problems. We made some adjustments to the car and then we went back out again when it was dark, which is quite early at this time of year. I'm looking forward to the rally

but I haven't set myself any particular targets. I'm here to learn and get experience. For the evening I have scheduled interviews with both the Finnish and international press and a photo shoot with Red Bull and other sponsors.

Kimi was quickly up to speed in the Citroen C4





Citroën Junior Team had some work to do...

Friday
January 29 0900
Rovaniemi, Finland

The press conference is at 9.45am in the City Hall; then the rally starts at midday. I've slept well, like I always do before any race. The press conference questions are in Finnish and English: I am asked about my targets for the year and what I hope to achieve. I explain that there is no particular target or pressure. This will only be the fifth rally I have started in my career, so there is no point making too many targets.

Friday
January 29 1230
Mantyvaara, Finland

We have completed the first proper stage of the rally and we are just over five seconds slower than Dani Sordo in the other Citroën C4 WRC. This is good, but actually I am not looking so much at the stage times. The most important thing is to have more time in the car.

Friday January 29 1445
Mantyvaara service park, Finland

We are back at service after the first two stages. The second stage did not go well for us; we went wide on a right-hand corner and went off. After about half an hour we were able to get back on the road again with the help of some spectators. There was not much

damage to the car: just some light damage to the bumper but we have obviously lost a lot of time. It doesn't matter: that is not why we are here. The mechanics do a great job to fix the car at service and we are on our way again.



MAKINEN/DPPI

...after altercation with a tree damaged Kimi's car

Friday January 29 2145
Rovaniemi, Finland

After my first day of rallying in a World Rally Car, I am happy. We still have some things to do to set up the car exactly as we like it, but we are certainly heading in the right direction. I had no problems at all during the afternoon and we were driving

consistently. The only difficult thing I noticed was that the lights were not pointing in the correct way on the dark stages, probably because we had to change the bonnet at the last service. Tomorrow we will try to increase the pace if it feels comfortable.

Saturday
January 30 1220
Mantyvaara service park, Finland

After three stages on the second morning, we now have three stages left to go in the afternoon. Then the rally finishes at about 5pm. The stages this morning were good – we had no problems and we set some solid times behind Dani in the other Citroën. I am still learning about the set-up of the car but I can already identify some areas where we need to improve. We make some changes to the car at the service park to understand a bit more about the effect they will have.



Kimi (r) and Kaj made it to the Arctic Rally finish

Saturday
January 30 1700
Rovaniemi, Finland

We cross the finish ramp in the town centre of Rovaniemi at the end of our first rally in the Citroën C4 WRC. It has been a very good experience. Of course, I have not just had to learn about the car but also about the pace notes – which is one of the most difficult things to get used to. Luckily, my co-driver Kaj Lindström is very professional and he has been able to help me with this. Next we have the Rally Sweden, which I am sure will be quite a different story.



WELAM/RED BULL

WELAM/RED BULL

STAGE STAR SHOWDOWN

This might be the last year of WRC as we know it, but there's plenty to look forward to, says DAVID EVANS

This is going to be a year of transition for the World Rally Championship. We've got new sporting regulations coming, new calendars and new technical regulations to face up to. The focus, the commercial types tell us, is on the 2011 re-launch.

Pah. Who cares about 2011, we've got Seb Loeb versus Mikko Hirvonen – the

rematch; a revitalised Petter Solberg; more Super 2000 screamers; an American who's pretty sharp on the handbrake and some bloke called Kimi Raikkonen. Sure, 2011 is vital, but let's not lose sight of the rock-and-roll season we're hours away from.

And who better to guide you through their hopes and dreams for the year ahead than the drivers themselves?

SEBASTIEN LOEB

Citroen C4 WRC

"A lot of people have asked about my motivation for this year, but it's the same as ever. I want to fight again and I enjoy what I do. Maybe at the end of the season I say: 'Okay, now I am fed up and I want to do something else.' That's the only reason for this option. I cannot say if I continue for three, four years or only for one. I wanted to have the possibility to say I stop if I want to [at the end of the year]."

"Mikko is going to be big competition again. The problem with Mikko is that he is quite good at everything. Last year, for sure, I still had an advantage on asphalt, but on gravel and snow it was more difficult. I think his only weakness is a little bit on asphalt, for the rest it's unpredictable which rally I can beat him on. I'm really the same as Mikko, but just better on asphalt!"

"This year I'm looking forward to the new rally in France, in my region of Alsace. I know the kind of roads we will have there, but I don't really know the stages. It may be like Germany, but I cannot say I'm used to the roads. I drove in one rally there in 2001. I don't know where the stages will be. I don't think it's a big advantage for me, it's just a pleasure to drive at home in front of my supporters. And if the rally is based in Strasbourg, this is a nice town."



Loeb is gunning for a seventh straight title



ROUND BY ROUND

Need to know which 13 rallies – where and when – make up WRC 2010? Look no further

ROUND 1 Sweden

DATE February 12-14

SURFACE snow

BASED Karlstad

FACT Didn't run last year, but Latvala won in 2008 to become the youngest ever winner of a WRC round at 22.



ROUND 2 Mexico

DATE March 4-6

SURFACE gravel

BASED Leon

FACT One of the most compact WRC rounds on the calendar. High altitude slashes engine power on the hot gravel.



ROUND 3 Jordan

DATE April 1-3

SURFACE gravel

BASED Dead Sea

FACT Achingly hot desert rally returns to the calendar, running a Thursday-Saturday format for the first time.





Can Hirvonen beat Loeb to secure his first title?

MIKKO HIRVONEN

Ford Focus WRC

"I've been waiting for this week since the day Rally GB finished. When I lost on Rally GB, I thought, 'Okay, fine, I lost it. Now let's get going again – I don't want to lose it this time.' Now I really want to kick his [Loeb's] ass this time!

"My feeling has changed in the last few years. When Marcus [Gronholm] retired at the end of 2007, I thought in the following year that if I was lucky I could hold on to the title race for as long as possible and we did for pretty long. But in the end we were not really fighting – we were 10 points behind. Then last year I thought, 'Okay, now we can really fight [for the title].' And we did. And now I don't want to lose. I want to win. I'm a bit

more determined this time and I really believe I can do it. It's definitely not going to be easy, but we can do it.

"There aren't so many weaknesses for Sebastien. He rarely makes mistakes. He made some last year and so I'm not expecting him to do the same again this year – that'll make it harder this time. All of the events are going to be key for me. I'm not thinking anything special about any of them – I tried that before and I always lose on the rallies I say are key for me! I know Sebastien's going to be strong on all of the rallies, but for sure I know I need to improve on asphalt. We are not good enough yet on asphalt. I think my good point is consistency and I always keep my head and I can keep going. But, for sure, that big crash is coming. There's no doubt someday it's going to happen. Hopefully not this year!"

ROUND 4 Turkey

DATE April 16-18

SURFACE gravel

BASED Istanbul

FACT The first WRC round to straddle two continents (Europe and Asia) courtesy of a new base in Istanbul.



ROUND 5 New Zealand

DATE May 7-9

SURFACE gravel

BASED Auckland

FACT Back to its best with a return for the northerly stages around Paparoa and an Auckland base again.



ROUND 6 Portugal

DATE May 28-30

SURFACE gravel

BASED Faro

FACT One of the best organised and more entertaining rounds of the year on some awesome dirt roads in Europe.



ROUND 7 Bulgaria

DATE July 9-11

SURFACE asphalt

BASED Borovets

FACT Bit of an unknown this one as it's new to the calendar. Borovets is a great ski town, but probably not in July...





Raikkonen has given the WRC a massive boost

KIMI RAIKKONEN

Citroen C4 WRC

"I always had the passion for the WRC and I wanted to try to see how it is. After whatever happened at the end of the year, we found the solution to race with a great team and Red Bull helping with the sponsorship. In the end it wasn't so difficult a choice [to come to WRC].

"I'm looking forward to all the rallies.

Apart from Jyväskylä [on Rally Finland], where I know it a little bit, everything is new. I don't know the places or the stages or anything. It's always exciting to go to a new place and see how it is. Everything is new, so it's exciting.

"I have a lot to learn. I need to get the experience on all different conditions and making the notes and listening to them right is also tough. You can make the notes, but to try to make them exactly as you want – and to drive on them at full speed is not so easy. If the notes are not exactly like they should be, then you can't drive as fast as possible.

"I know more about driving on asphalt than any other surface. It definitely helps to find the right line and to find the braking point. In that way, it should be easier, but until we do the first test or rally, it's impossible to say.

"Every sport is difficult when you start, but there are so many more things you cannot really change. It is what it is, but in Formula 1 you go to the same circuit and lap by lap you know it's going to be the same. But, in rallying, you can go from one stage to the next and it can be completely changing. There are many things that can change in rallying and you cannot affect those areas.

"Rallying is definitely more relaxed and more fun. I like it because every corner is different. There are a lot of things which can challenge you and in the end you are driving against yourself. There's a more warm feeling here than in Formula 1. It's great and people have been very helpful."

JARI-MATTI LATVALA

Ford Focus WRC

"The target for me this year is not always to win the rallies, but to be there in the top three. I'm now a second driver, so my role is a little bit different in that I am a supporting driver for Mikko, so my role is to make sure that we score points for the manufacturers' championship. So it means that maybe I have to back off a little bit. But, on the other hand, it is a chance for me to really work on finding some consistency, which I have been missing. The expectations for me are not so big now. Last year, I had pressure but it's okay now. Obviously when I made the mistake in Poland [crashing out of second place on the final stage] people started to question my position, but 2009 is now

behind me and I want to look ahead.

"I learned a lot for this year. We did a lot of work on the notes and improved them. Miikka [Anttila, co-driver] changed his way of saying the notes – he is more aggressive now. He is working with his voice more. When it comes to slow corners he is pushing harder with his voice to wake me up. Also I learned a lot about how I need to prepare myself for the rallies. Even how I start to think about things too much. I was analysing too much and maybe I need to calm myself and concentrate more on the driving.

"Even though there are a lot of things going on around you on the rallies, you never take those things with you when you are on the stage. You have to just switch off your head."



Sordo needs to score that breakthrough WRC win

DANI SORDO

Citroen C4 WRC

"It's a difficult question: when will I win? But, I am waiting for this victory. I don't know where it will come, but I start the season flat out to try to win stages and rallies.

"I have confidence, but I need to start well. The team gives me confidence that I don't have to help Sebastien all the time with things like running ahead of him to clean the road, like I did in Argentina [last year]. I need to push hard in the first rallies. I have good motivation

this year and I like the rallies, with Mexico, Sweden and New Zealand coming back. They're nice rallies for me – and there are four rallies on asphalt, too.

"I don't feel more pressure. I'm more relaxed. I have confidence this season, I don't know why. There's more pressure for the other drivers; for Kimi [Raikkonen] there's pressure because it's his first year in the World Rally Championship and he needs to make good pace notes and learn the rallies to find the experience."

ROUND 8 Finland

DATE July 26-28

SURFACE gravel

BASED Jyväskylä

FACT Major changes for 2010: two-day Friday-Saturday format with a seeding stage through Jyväskylä on Thursday night.



ROUND 9 Germany

DATE August 19-22

SURFACE asphalt

BASED Trier

FACT Back after a year out and with the addition of a 30-mile stage through the Baumholder military testing ground.



ROUND 10 Japan

DATE September 10-12

SURFACE gravel

BASED Hokkaido

FACT The tight and twisty gravel roads around the city of Hokkaido return to the WRC after a year's absence.



ROUND 11 France

DATE October 1-3

SURFACE asphalt

BASED Alsace

FACT France's WRC round runs off the island of Corsica for the first time. We're going to Loeb's backyard in Alsace instead.





Latvala aims to support team attack during 2010

“I’m really fired up – and I mean properly. What I’m trying to do is tough but I am going to give it everything. I’m just here to nail it”

Petter Solberg

PETTER SOLBERG
Citroën C4 WRC

“I’m really fired up – and I mean properly. I have a much better plan for the season, but it has been even busier than last year. I’ve been two months away from my family just to get the sponsors together and I’ve been working on my fitness. I have two 2009 Citroëns, the trucks and everything ready. The reason I have two cars is, because if I am going to go for a big attack, I need the spare car so I am not scared and have to drive to protect the car.

“It’s been a lot of wheeling and dealing. I do all the meetings, Pernilla [his wife and team co-owner] does all the contracts and it is simple; there is no bullshit. I am not here just to compete this year. If this is my last year, because there are no manufacturers coming in, at least I am showing the energy, hunger and motivation to get back on top.

“Everyone knows what I have been through. I know what I can do. What I’m trying to do now is a tough job but I am going to give it everything. I’m just here to nail it.”

NEW-LOOK WRC ITINERARY SCHEDULE SHAKE-UP

WE’RE TOLD the big calendar shake-up for the WRC is coming next year. I’m sure that’s the case, but the changes to this season are hardly minuscule: seven events out, nine events in, including two new ones (a new French event being one of them) – and some major changes across the board.

For the first time in the modern era of the WRC there will be no competitive action on three WRC Sundays this season as events make the most of the opportunity to refresh their schedules.

Rally Jordan and Rally Bulgaria have gone for a Thursday start and Saturday finish, but it’s the Finns who have been most radical. This year’s Rally Finland will start with a seeding stage through the town of Jyväskylä on Thursday evening (and, with such importance placed on running order, expect this to be a no-holds-barred contest to avoid being first into SS1) followed by two monster days of rallying on Friday and Saturday. Sunday has

been set aside to recover from the post-event party. A wise move – this is Finland after all.

Most of the events have gone for a change of route this year, starting with this week’s Rally Sweden, which heads north again in an effort to find snow-sure stages.

World rallying might not be new to Turkey, but instead of seeing Istanbul in transit, the WRC will now decamp in the city that straddles two continents – another first for the WRC. Corsica and its glorious WRC heritage is a thing of the past – we’re going to mainland France this year. The Rallye Alsace-Vosges, Sebastien Loeb’s local event, has been upgraded and fast-tracked straight into the WRC.

Despite being at the centre of much speculation, Rally GB will remain in Wales this year – but this is widely expected to be the last time the WRC will tour the valleys, with a move back up to the north of England on the cards for next season.



Solberg promises an all-out attack approach

ALL PICS: MCKLEIN/DE

ROUND 12 Catalunya

DATE October 22-24

SURFACE asphalt

BASED Salou

FACT A cracker of an asphalt event, usually a Citroën lock-out. Running later in October could mean more rain to spice it up.



ROUND 13 Great Britain

DATE November 11-14

SURFACE gravel

BASED Cardiff

FACT This could be the final dash through the Welsh woods for a while, as the event prepares to move north next year.



The coastal blasts of New Zealand are back again



P61 FULL LIST OF WRC RUNNERS AND RIDERS



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TEAM BY TEAM

Who's likely to worry main men Loeb and Hirvonen on the stages this season?



CITROËN TOTAL WORLD RALLY TEAM Based: Versailles, France; Car: C4 WRC; WRC titles: 5

Citroën's C4 remains the car everyone has to beat



SEBASTIEN LOEB (F)
Co-driver: Daniel Elena
Age: 35
WRC starts: 125
WRC wins: 54
WRC titles: 6
We say: Starts the season favourite for a seventh consecutive title. But Hirvonen's coming... quickly.



DANI SORDO (E)
Co-driver: Marc Martí
Age: 26
WRC starts: 71
WRC wins: 0
WRC titles: 0
We say: He has to win this year – and win on merit – or be forced to stand aside for Sebastien Ogier.



P63 \$2000 CARS
JOIN THE WRC RANKS

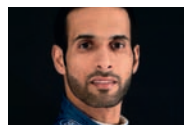
BP FORD ABU DHABI WORLD RALLY TEAM Based: Cockermouth, Great Britain; Car: Focus RS WRC 09; WRC titles: 3



MIKKO HIRVONEN (FIN)
Co-driver: Jarmo Lehtinen
Age: 29
WRC starts: 98
WRC wins: 11
WRC titles: 0
We say: Needs to beat Loeb regularly to maintain his self-confidence and be a title threat.



JARI-MATTI LATVALA (FIN)
Co-driver: Miikka Anttila
Age: 24
WRC starts: 79
WRC wins: 2
WRC titles: 0
We say: Blinding speed, but he's got to play the team game this season. It's going to be interesting...



KHALID AL-QASSBI (QAT)
Co-driver: Michael Orr
Age: 37
WRC starts: 29
WRC wins: 0
WRC titles: 0
We say: Still levelling a steep learning curve, but should look to grab more points this season.

CITROËN JUNIOR TEAM Based: Versailles, France; Car: Citroën C4 WRC; WRC titles: 0



Raikkonen joins the WRC in the best car out there



KIMI RAIKKONEN (FIN)
Co-driver: Kaj Lindstrom
Age: 30
WRC starts: 1
WRC wins: 0
WRC titles: 0
We say: Won't win, but will hit the podium later in the year – and bend a few C4 panels along the way.



SEBASTIEN OGIER (F)
Co-driver: Julien Ingrassia
Age: 26
WRC starts: 20
WRC wins: 0
WRC titles: 0
We say: The young Frenchman needs more experience, but could win this year. Massive talent and future champion.

STOBART FORD VK M-SPORT WORLD RALLY TEAM
Team Based: Cockermouth, Great Britain.
Car: Focus RS WRC 08; WRC titles: 0



MATTHEW WILSON (GB)
Co-driver: Scott Martin
Age: 22
WRC starts: 61
WRC wins: 0
WRC titles: 0
We say: Real progress last season and could threaten the podium with a trailing wind this time around.



HENNING SOLBERG (N)
Co-driver: Ilka Minor
Age: 37
WRC starts: 83
WRC wins: 0
WRC titles: 0
We say: When everything's going his way, he's a podium threat, when he's fighting the car, he's nowhere.

PETTER SOLBERG WORLD RALLY TEAM
Based: Monaco, Monte Carlo;
Car: Citroën C4 WRC; WRC titles: 0



PETTER SOLBERG (N)
Co-driver: Phil Mills
WRC starts: 149
Age: 35
WRC wins: 13
WRC titles: 1
We say: Will win rallies this year and deserves another shot at a second drivers' title.

MUNCHI'S FORD WORLD RALLY TEAM
Based: Cockermouth, Great Britain.
Car: Focus RS WRC 08; WRC titles: 0



FEDERICO VILLAGRA (RA)
Co-driver: Jorge Perez Compagnon
Age: 40
WRC starts: 39
WRC wins: 0
WRC titles: 0
We say: Solid, consistent, unlikely to crash and unlikely to win. A podium finish would be a mega result.

MONSTER WORLD RALLY TEAM
Based: Cockermouth, Great Britain;
Car: Focus RS WRC 08; WRC titles: 0



KEN BLOCK (USA)
Co-driver: Alex Gelsomino
Age: 42
WRC starts: 3
WRC wins: 0
WRC titles: 0
We say: Likely to get a bit of a shoeing early doors, but this year's about learning for this American automotive gymnast.

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M0210P

DAY SCREAM BELIEVERS

A new class for Super 2000 screamers joins the WRC roster for 2010, as DAVID EVANS explains



Patrik Sandell is back with the Skoda Fabia S2000

MCKEIN/DE

More than ever this year, there will be reasons to hang around stage-side once the supermen of world rallying have passed – there's a new championship specifically for screaming Super 2000 cars.

A new support series was one of the things the WRC needed least – the route to the top is complicated enough – but the growing popularity of S2000 means it has to be accommodated. Unfortunately, the powers that be missed a golden opportunity to jettison a Junior series that's become an archaic and irrelevant formula.

Let's focus on the good stuff. The S-WRC (as the S2000 WRC will be known) will run on 10 rounds, with drivers scoring on seven. A 10-strong entry for this fledgling series might not look the biggest, but it's strong considering the financial commitment required to sign up for seven events – two of which are outside Europe.

And there's plenty of class among those 10. Reigning Junior title holder Martin Prokop (Ford) is joined by fellow FIA award winners Nasser

Al-Attiyah (Ford) and Patrik Sandell (Skoda). Then there are former factory drivers Janne Tuohino and Xavier Pons, both in Fiestas, and rising stars Eyvind Brynildsen (Skoda) and Michal Kosciuszko (Ford).

The only downside to this series is the ability for the drivers to pick and chose events. Only in Wales will all 10 face each other. Japan will be the most poorly supported, with just three cars starting. On the whole, though, there will be between six and eight S-WRC runners scrapping for honours.

The Production Car WRC is back with another quality field. For these drivers it's six scores from nine events, so there's potential to avoid each other here, too. Sixteen crews have registered and once again Rally GB will be the most popular with 15 entered.

Last year's champion Armindo Araujo returns to defend his title with a Mitsubishi Lancer Evo X. Subaru stalwart Toshi Arai will be right behind him and this time the Japanese has top British co-driver Daniel Barritt to show him the way. The PWRC field is bolstered by the five Pirelli Star

Drivers, where Estonian Ott Tanak is already emerging as a favourite to set the pace in the yellow Lancers.

And, as for the Juniors, there were four at the last count. Let's move on...

With the support series providing some solid foundations for the rallies this year, the FIA has also offered the organisers more freedom to run their rallies. Essentially, the cloverleaf format is gone. Organisers will have to ask for a waiver to run remote service parks, but it's in everybody's interest to make it happen. World rallying's roadshow is coming back. And so are the kind of challenges that made the sport great: longer rallies, bigger stages and more running in the dark.

Ford man Mikko Hirvonen took one look at the itinerary for the opening leg of Rally Sweden and smiled at the concept of getting out of bed before 5am to drive almost 500 miles.

"Sweden will be a challenge," he said. "Who can be bored on the road section and then turn it on in the stage! This is what rallying used to be like and I hope it's here to stay."

Let's see what he thinks next week... ❧

WHO CAN STOP JI



Nothing has clouded Johnson for four years

Jimmie Johnson is bidding for a fifth title. Who can stop him? CHARLES BRADLEY names a few

With an unprecedented four consecutive Sprint Cup titles to his name, Jimmie Johnson is the king of NASCAR's castle. This weekend in Daytona he embarks on a quest for a fifth title for Chevrolet's top team, Hendrick Motorsports. The rest begin their mission to stop him.

In the Johnson camp, little has changed. Crew chief Chad Knaus has yet to commit to the new contract that team boss Rick Hendrick has offered, and technically he's a free agent in 2011. But expect Knaus to stay put, unless someone tempts him away with an offer that's too good to refuse – like Tony Stewart had to co-own a team.

Johnson says: "Success makes you want to experience more success. We've had an amazing run of four years. We certainly want to keep it up, keep it going. I feel very good with the

fact that our team is together."

Johnson's intra-team opposition remains the same, with Jeff Gordon, Mark Martin and Dale Earnhardt Jr his enemies within Hendrick. Martin feels he'll be in a stronger position this year, and is keen to collaborate with Earnhardt's crew in the way the Johnson-Gordon teams do. That has started well, as they've locked-out the Daytona 500 front row. Gordon won't want to see his protege overtake him in terms of number of titles, while Earnhardt just craves to prove himself at the top level again (see page 66).

But where are the other teams at? And how do they plan to manoeuvre their drivers into the top 12 by the end of race 26, which qualifies them for the Chase for the Championship? More importantly, what's their unique selling point to knock Johnson off his perch?

JOE GIBBS RACING

TOYOTA

USP: Two A-list drivers with proven title-winning team

➔ In the past decade, the team of Joe Gibbs (a three-time Superbowl-winning American Football coach) has won the Cup on three occasions: twice with Tony Stewart and once with Bobby Labonte. Its driver line-up today, however, is totally forward-focused with Denny Hamlin, Kyle Busch and Joey Logano boasting the biggest chance for Toyota to win its first NASCAR title.

Hamlin, who had the speed but whose '09 title tilt went off the rails with two engine failures and a crash in the Chase, says: "We didn't have the reliability to win the championship, that's the bottom line. I think myself and the team know how to win this championship. Now the job is to execute it."

Busch didn't even make the Chase last year, but did win the Nationwide title – which Coach Gibbs says will stand him in good stead for his 2010 Cup assault. Busch has re-signed a multi-year deal, and is bullish about the future: "Technologically, we might be better than Hendrick, but we have to apply it," he says.

Logano is a precocious young talent who continues to improve. He won a race last year, but must set his sights on the Chase to continue his momentum.



PENSKE RACING DODGE

USP: Sole Dodge team with huge resources

➔ Best of the non-Hendrick drivers last year was Kurt Busch, 2004 champion with Roush, whose consistency was outstanding. At 31, the elder of the Busch brothers is seeking that second title to kick-on his standing in the sport.

The intriguing aspect of Roger Penske's attack is that it's the only team running Dodge equipment. 'The Captain' sees this as an advantage: "All the resources are supporting our drivers – we have that benefit

with Dodge. This is not just putting your Dodge decals on and running round the racetrack. This is about selling cars.

"Last year we beat all the Fords, we beat all the Toyotas. Well, we've got to figure out how to beat Hendrick. If anybody has any insight, we'll be glad to add one more person to our staff."

Besides Busch, his team-mates have it all to prove. Three-time IndyCar champion Sam Hornish Jr has failed to shine since his switch to stock cars. The third driver is Brad Keselowski, whose first win at this level came when he put Carl Edwards in the fence at Talladega. His feud with Denny Hamlin in the Nationwide Series last year means his first full season in Cup should produce yet more fireworks.



Kurt Busch wants second title win

MMIE JOHNSON?



Busch (18) and Logano spearhead Gibbs attack

STEWART-HAAS RACING CHEVROLET

USP: Tony Stewart

➔ When the two-time champion left the safe confines of Joe Gibbs Racing to drive for (and co-own) the tiny Haas team, no one really thought he'd win four races and get both himself and teammate Ryan Newman into the Chase. Using Hendrick-supplied kit, 'The Smoke' flourished with responsibility of team ownership, and it rekindled the fire behind his charging driving style.

With lessons learned, expect him to be an even stronger force, and he's firmly focused on scoring title number three – and wants to be the man to topple Johnson.

"Whoever is the one that dethrones him," he says, "they're going to be wearing a crown bigger than anybody else, because they're going to take a lot of pride in saying they knocked him off that streak finally."



Tony Stewart is keen to topple champ Johnson



JPM made the Chase in '09 and aims for a repeat

EARNHARDT GANASSI RACING CHEVROLET

USP: Combined team strength, plus Juan Pablo Montoya

➔ The amalgamation between teams formed by the legend that was Dale Earnhardt and the impresario that still is Chip Ganassi is undoubtedly becoming a stronger force. Montoya's qualification for last year's Chase was a surprise to many, and the way he ran in it was mightily impressive – circumstance, rather than any of the temper-tantrums he's famous for, took him out.

"Our goal was to put a car in the Chase and while many thought it wasn't a realistic goal, we did it," says Ganassi. "The guys in the shop make this team work. [Montoya] likened it to laying bricks – you do it one brick at a time, which is what NASCAR is all about."

The dynamic between its team-mates will be crucial: at Bristol last year Montoya "ran out of patience" and deliberately punted off Ganassi returnee Jamie McMurray. They say they've buried the hatchet – Ganassi must pray it won't be buried in their helmets on track.

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USP: Ford's answer to Hendrick

➔ After coming close with Carl Edwards in 2008, Ford giant Roush suffered a dismal campaign last term. It started well enough, with 2003 champion Matt Kenseth winning the Daytona 500 and the following round in California, but its attack fell flat. Greg Biffle was its only driver in the top 10 – and he didn't win a race all season. Neither did Edwards, who strode to nine victories a year earlier. So what went wrong?

Team boss Jack Roush thinks he knows why: "What makes the difference between winners and losers is what you do with your time. We spent a disproportionate amount of ours trying to find that next breakthrough – the thing that NASCAR had missed, the thing other teams were overlooking. Guess what? We didn't find it."



Edwards needs to rediscover win rate

"This year, we've increased the number of engineers from 30 to 36 and, guess what? We're gonna maintain the same kind of effort to find that next breakthrough, but at the same time we've got the resources committed to be able to scrutinise every small part of the car and do what we need to do."

Roush says his team has learned its lesson, and ran strongly in last week's Daytona's Bud Shootout.

➔ **P66 EARNHARDT JR**

EARNHARDT CUTS TO THE CHASE

NASCAR's most popular driver is determined to end his barren spell. By **GLENN FREEMAN**

Dale Earnhardt Jr is a man used to pressure. As if being the son of a legend wasn't enough, the death of his father in the 2001 Daytona 500 meant that the interest and expectation heaped on Dale Jr's shoulders rocketed when his career at the top level was just one season old. Fans without a hero instantly turned to the next generation Earnhardt and willed him to somehow live up to his father, leaving him with nowhere to hide from the spotlight.

So perhaps that's why he is able to handle attention so well nine years on, even if he's repeatedly dealing with questions surrounding his recent lack of form. Earnhardt has only won three NASCAR Sprint Cup races in the past five seasons, the last two of which he



Now's the time for the #14 Chevy to win again

has spent with the best team in stock car racing – Hendrick Motorsports. When you compare that to his first five years at the top level, which yielded 15 wins, it's easy to see why he gets given such a hard time. But he doesn't duck the difficult questions.

"I feel a lot of pressure from the media or from the public," the 35-year-old admits. "You get headlines every off-season about what everyone expects you to do the next season, but I've dealt with that over time. The headlines sting a little bit, so you just have to wait for it to wear off."

But despite the disappointments of recent years, which were topped off with his worst ever finish in the standings last year (25th), Earnhardt is still the fan favourite in NASCAR. This year, Jimmie Johnson could win a fifth straight championship, Tony Stewart

could win his first title as team owner, or Mark Martin could take his maiden crown at the age of 51, and the public would still vote 'Little E' as their main man. Yes, he owes that popularity in the main to his father, but all that does is make it even more important to him to succeed. And after missing the Chase for the Championship – which some cynics suggested was set up to keep Earnhardt in the title hunt late in the season – for the third time in five years, he says that the hardest thing to deal with when it's going badly is knowing how many people are willing him on every week.

"When you miss the Chase, you can make it up to your sponsors," he says. "Your family will understand, but you never really feel you can repay the fans. It's disappointing to me, and I feel like I've let them down. They put up the fight with you all year long, they argue at work with somebody who's pulling against you, and then you come up short for them. So you do feel bad – that's the thing that bothers me the most out of having a disappointing year."

So far, the dream move to Hendrick has looked more like a nightmare. But as the ever faithful 'Junior Nation' prepares for another year of cheering on Earnhardt, he feels there is plenty to be optimistic about ahead of the curtain-raising Daytona 500.

His team on the #14 Chevrolet went through some wholesale changes in the second half of last year, which included the permanent appointment of crew chief Lance McGrew, who had been drafted in mid-'09 in place of Earnhardt's cousin Tony Eury Jr. That brought to an end a fiery relationship that began when the pair first worked together at Dale Earnhardt Inc.


It was often suggested that their family ties prevented the two from working well professionally, with Earnhardt's attitude on the radio during races called into question. Eury Jr is now working with IndyCar racer Danica Patrick as she dips her toe in the NASCAR ocean this year, and you

couldn't help but feel that his praise for her feedback during her ARCA test was a dig at his previous driver. But with all of the shuffling out of the way, Earnhardt sees no reason why he can't rediscover his form for 2010.

"It wasn't so long ago that we didn't know what was going to happen with the future of the team," he says. "And that just creates instability. So when Lance was able to solidify his position, we could build back some confidence, trust, and belief in ourselves. Lance is telling me that the mood in the shop is completely different to last year, and he seems far more enthusiastic than he was at first. So I feel a lot better after hearing him and understanding how much has changed."

With that in mind, the targets are clearly set out as well.

"Anything less than three wins will be a disappointment," he says. "We have three team-mates that made the Chase last year [Johnson, Martin and Jeff Gordon took the top three places in the standings], so we have everything we need to get it done and challenge for the championship. Now we have to prove ourselves."

With statements like that, Earnhardt can expect the microscope to be on him as much as ever from now until November. 

IT WASN'T ALWAYS THIS BAD...

Dale Earnhardt Jr has enjoyed his fair share of success in NASCAR – he's even admitted that he's already achieved more in the sport than he ever expected to. But the good times are starting to become all-too distant memories.



2008

Wins first time out for Hendrick in Bud Shootout and his Daytona qualifying race. Runs in the top five in points for most of the season, but slumps to 12th in the Chase.



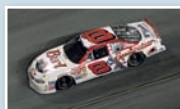
2004

Joins his father on the list of Daytona 500 winners, and finishes the season fifth in the standings with six wins. Only Jimmie Johnson has more with eight.



2003

Scores his best championship finish to date with third place behind Matt Kenseth and Jimmie Johnson with two victories.



2001

Wins the first race at Daytona since his father's death in the season-opening 500, and backs it up with another at Talladega, the scene of Dale Sr's last win a year before.



2000

Becomes the first Cup rookie to win the mid-season All-Star race, but at the end of the season misses out on Rookie of the Year to Matt Kenseth.



1999

Wins second straight Busch series title, and makes a handful of Cup starts in preparation for a full-time move to NASCAR's top tier.



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AJ ALLMENDINGER'S GUIDE TO DAYTONA



ULTIMATELY, THIS track is like any superspeedway: it's boring! But I really enjoy it in race conditions, because the track gets so hot and so slick, and the surface has gotten so old and bumpy that it is a handful. It is one of the most tiring races we do. You are always sliding around and hanging on. Even if you are fast, you don't feel comfortable in the middle of the pack.

If I'm really hooked up, I'll run down the bottom, right on that yellow line, kind of digging through the corner. If I'm a little loose or tight, I need to be in that outside lane.

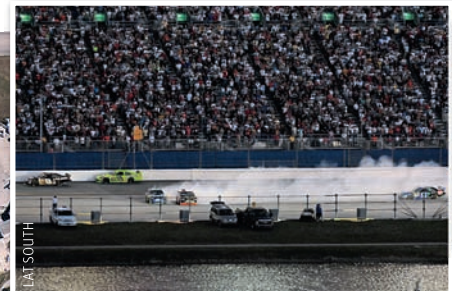
URNS 1 & 2

There's a bump down low where the car bottoms out. On your own it's okay, but in a pack, if your car is loose or tight, that's where it shows. Hit that and it immediately makes the car unstable. Up top, it's not as bumpy but it is slick and it's a difficult corner anyway you run it. When the tyres are brand new you can run through the middle, but if you have 10 or 12 laps on your tyres, and

you get caught in the middle, it's death! I asked Jeff Gordon what to do in the middle and he said, 'If your car's not good just bail out as quick as you can'. If you have someone on the outside it makes your car really loose. If you have someone in front of you it makes your car tight.

TURN 2 EXIT

When you come off T2, especially when you are running up high, the track comes back at you. You see a lot of guys lose grip and slap the wall. Down the bottom there's more room for error.



URNS 3 & 4

For whatever reason, when your tyres are getting old and someone is pushing you, this corner makes your car really loose turning in. I haven't figured out why this is so different to Turn 1. You've got to be on your toes getting in there, but once you are in the bumps aren't as heavy, or as big, as Turns 1 and 2. The same thing happens at 4: if you're up the track and your car gets tight, there's a real chance to slap the wall. Normally you have a wind blowing at you down the front straightaway, so as you come off 4 the air is on your nose and you get more downforce.

PITSTOP IN

There's no speedlimiter on the car, but you can make up a lot of time coming into the pits, so you have to get it down to 45/50mph. Under yellow, before the race, the pace car runs at pit speed, so that's 4800rpm in second gear. NASCAR allows 5mph over, so it's tough. While you're looking at the rpm, you've got 43 pits of people jumping out in front of you. Controlled chaos? A lot of time it's not controlled at all.



TRI-OVAL

When you are running three-wide in the middle it's a turn, because around this place the track is so slick and the air buffets so much between the cars. It's actually hard here because there's not a lot of banking.



PITSTOP OUT

Qualifying in Sprint Cup doesn't mean a lot per se, but it's big on pit boxes. A lot of the tracks have six to seven openings, so if you're in the top six or seven you can pick a box with an opening in front of you or behind you. You know someone is going to pit in front of you, so you short stop your pitbox, so you can get angled out. Then the pitcrew does its stuff: four tyres and fuel in 12.5 seconds - running around the car! - it's unbelievable. When you leave the pitbox, there's cars coming at you and usually tyres bouncing in front of you. Not a place to relax.

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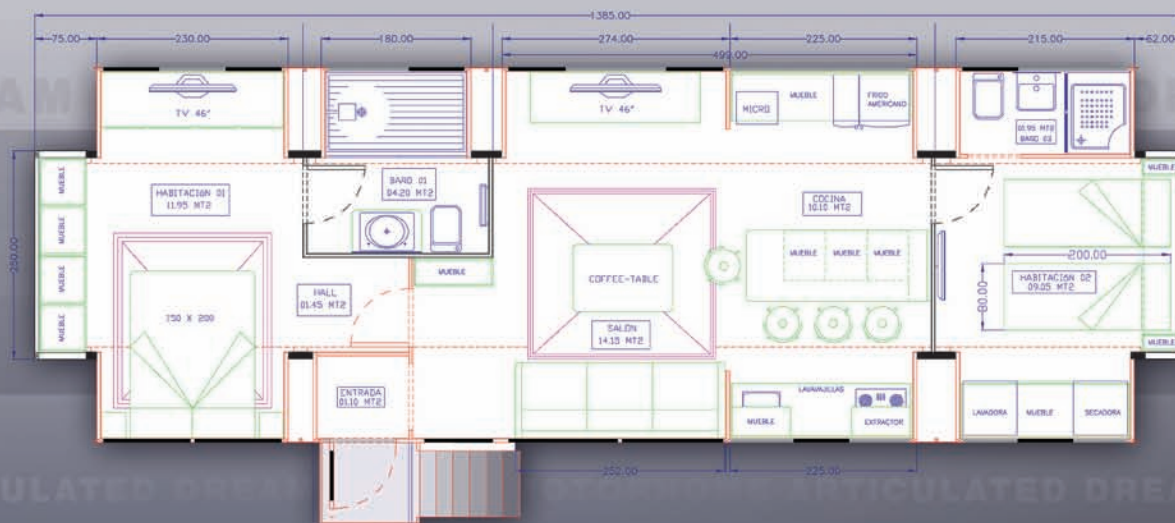
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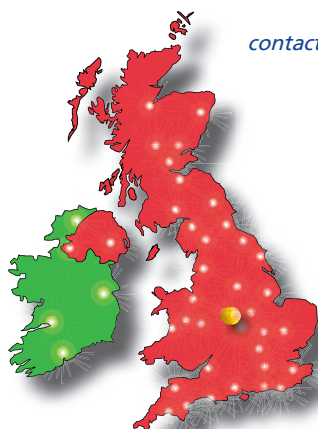
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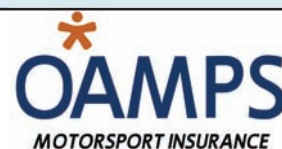
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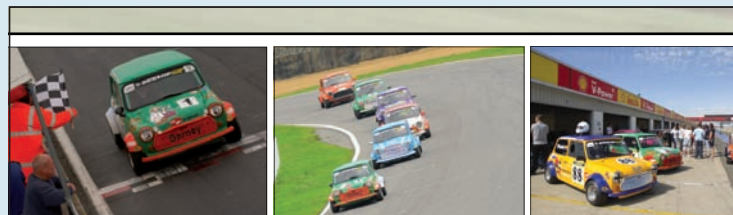
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Swedish star poised for Fortec deal, p82

Mosler set for British GT return after rule change

Crunch talks with MSA pave the way for MT900 to make GT3 comeback



Mosler will now be eligible for points

» THE WORKS Rollcentre Mosler MT900 is due to return to the British GT championship following a specially convened meeting held last week between Mosler boss Martin Short, the British Racing and Sports Car Club, the Motor Sports Association and series promoter SRO.

The Mosler withdrew from British GT in the middle of last season after the MSA ruled the MT900 ineligible for British GT3 because of issues with the car's homologation (see AUTOSPORT, August 20).

British GT rules stated that GT3 cars must run "strictly to FIA GT3 technical regulations and their respective technical forms." The car has never been homologated by the FIA as a GT3 car, but had been allowed to score points in British GT by SRO using a national homologation secured in Belgium.

Rival squad Team Pyro, which ran the 2009 championship-winning Ascari for twins David and Godfrey Jones, protested that the regulations did not support the Mosler's entry.

When the MSA upheld this protest on appeal last season, Rollcentre boss Short withdrew the car from the championship rather than allowing it to continue to race as a non-points scorer in the category's Invitation class.

BREAKTHROUGH

Following a meeting on February 4 between Short, MSA chief executive Colin Hilton, MSA technical director John Symes, BRSCC chief executive Bernard Cottrell, and SRO boss Stephane Ratel, those rules have now been changed.

According to Short, a GT3 car homologated nationally by the Royal Automobile Club of Belgium and other national associations – subject to approval by the MSA – can be admitted within the British GT3 Championship as a full points scorer.

"Stephane, Bernard and myself all recognise that despite SRO's wish for the Mosler to be in the championship, the regulations were not in order," said Short. "That has now been fixed, and whilst we are all waiting for the final regulations to be passed by the MSA, it should now be a matter of course."

"Last year was very traumatic for us. In my opinion, small manufacturers should be allowed to race against the controlling powers of the 'grand marques'. Rollcentre Racing entered British GT in 2000 with a TVR that we built ourselves, and that laid the foundations for TVR's eventual entry into the Le Mans 24 Hours. We entered Le Mans five times as a direct result of our apprenticeship in British GT."

THE SRO POSITION

AUTOSPORT understands SRO could have requested a rule change from the BRSCC before the start of the 2009 season, but chose not to do so. It then accepted the MT900 into British GT3, apparently contravening its own rules.

SRO boss Stephane Ratel welcomed the change to the rules and maintained that the company had always wanted nationally homologated cars to be eligible for British GT3.

"We always considered that nationally homologated cars were eligible in the GT3 class of the British championship, but the MSA did not have 'national homologations' and did not consider the Belgian one valid," he said.

"Consequently, Mosler made an official request to the BRSCC to have the wording of the rules corrected to allow 'Belgian-homologated cars' in the GT3 class of the British championship."

"This request was passed on to the MSA and it was approved. The sporting regs have been modified accordingly, prior to the closing date for entries in the 2010 championship."

The move paves the way for Rollcentre Racing, winners of the 2003 British GT title in a Mosler, to place an entry for the 2010 British GT3 championship, and the team is now actively seeking drivers.

AUTOSPORT SAYS...

BEN ANDERSON
EDITORIAL ASSISTANT

ben.anderson
@haymarket.com



SO, THE much-maligned Mosler has been allowed back into British GT, as a fully paid-up GT3 points-scorer.

This has delighted Rollcentre boss Martin Short, who was left fuming by the decision last summer to strip his Dan Brown-driven title contender of its championship points and dump it into the Invitation class.

Not content with only being allowed into a two-horse race with the Ginetta G50Z, Short pulled his car out of the series and has spent the intervening months fighting to get his beloved MT900 back into the playpen. Last week's rule change is his reward.

The move will also please series promoter SRO, which always wanted the Mosler in GT3 and now has the correctly worded regulations to make it so (again).

After a strong 2008, British GT hit the skids somewhat last season, so the return of another car is surely a welcome boost to numbers at a crucial time for the series.

Perhaps it is not so welcome if you are one of the Mosler's main rivals. Plenty kicked up a stink about a perceived performance advantage enjoyed by the MT900 and its (just about) all-silver driver line-up last season, even before the clever dicks at Pyro managed to spot a critical flaw in the British GT rules and get the car thrown out of GT3.

It will be interesting to see how rival teams react now the car is back on their grid, and how the Mosler gets on against the new Ferrari 430 Scuderia, which seems to be the car of choice in British GT at the moment. In international GT ace Allan Simonsen's hands, the 430 Scuderia should be an absolute flyer this season, so Mosler may struggle to pick up where it left off.

Extra contact details

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CONTENTS

p86 CAR FOCUS
TIM LEWIS ALFA

Blomqvist closes on Fortec deal

Swedish teenager set to sign with leading squad after showing stunning testing pace



JAKOB EBREY



Tom Blomqvist, son of 1984 World Rally champion Stig, is on the verge of completing a deal to race in the 2010 Formula Renault UK championship with leading squad Fortec Motorsport.

AUTOSPORT understands the 16 year old, who won twice on his UK debut for the team in last year's Formula Renault Winter Cup at Rockingham, will sign to race in the main series at the end of this

week. Blomqvist tested one of Fortec's new-for-2010 Caparo/Barazi-Epsilon-built cars at Oulton Park last week and was due to test again at Brands Hatch on Tuesday as AUTOSPORT closed for press.

Blomqvist reportedly lapped a second faster than rivals in wet conditions at Oulton, before curtailing his running early with a heavy crash at Druids.

Team manager Dave Moore said: "As

long as he can keep his head together there's no reason why he can't be a title contender – every time he's been in the car he's been quickest.

"As a person he's just so mature for his age, and the way he is in the car he's just so relaxed – it's a natural thing for him.

"A lot of drivers are quick, but they have really got to work at it. I'm not saying it comes easy to Tom, but you can see the natural ability – it's in the genes!"

The team's first 2010 FRenault UK signing Alex Lynn also showed well in testing at Oulton and Moore is planning to announce a third driver shortly.

Fortec was also due to test 2008 Rotax Junior Max karting champion Joseph Reilly, who contested the 2009 Formula Renault Winter Cup for rival squad Hillspeed, and Ginetta Junior graduate Mitchell Hale in BARC-spec cars at Brands as AUTOSPORT closed for press.

British GT

G50 racer looks to Chad Ferrari

GINETTA ACE Michael Broadhurst is targeting a switch to British GT in a Chad Racing Ferrari 430 Scuderia after testing for the squad last week.

The GT4 European Cup race winner drove one of Chad's 2008-spec 430s at Snetterton, but is planning a full British GT campaign in one of the team's new 2010 models if he can raise the budget.

Broadhurst said: "We're looking to put together a deal to run in British GT with Chad this year so we did this test to get to know the team and see how things gelled. The test was soaking wet, so not ideal, but the car was really good and the team was very happy.

"The focus is the Ferrari deal, but they've got an Aston Martin Vantage they're going to run in GT4, so I might do some one-off rounds in that. A GT budget is more realistic than a G50 Cup budget, but whatever happens we'll be out in something."

Broadhurst is also in discussions with Welch Motorsport about a dual campaign in the G50 Cup.



Broadhurst tried a 2008 Ferrari 430 at Snett

British Formula Ford

Jamun signs Dutch rookie

DUTCH RACER Jeroen Slaghekke will race for top team Jamun Racing in the 2010 British Formula Ford championship.

The 17-year-old will partner Josh Hill, son of 1996 F1 world champion Damon, in one of the multiple title-winning team's Mygales.

Slaghekke tested for the squad at Brands Hatch and Snetterton before Christmas. This year will be his first in single-seaters after two seasons spent racing in the Dutch Suzuki Swift Cup. He won two races and finished third in the points in 2009.

Slaghekke said: "I am very happy. The team has engineers and mechanics that are capable of getting the best from the car.

"Everything shows professionalism: The structure of the organisation, the people, the communication within the team, the cars – everything is perfect.

"In this Championship I will get 'value for money', which means a lot of tests, many races, a lot of participants and exciting racetracks. This is a really big advantage compared to other championships."

Team boss James Mundy added: "I think he's going to be good. He's not that experienced, but did quite well in testing before Christmas and we'll be able to bring him along."

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Ginetta Junior

Moore's maiden test for new G40

FORMER GINETTA Junior and G50 Cup champion Nigel Moore gave the British marque's new G40 model its maiden test run at Snetterton last week.

The car is due to replace the old G20 coupe in the TOCA-supporting Ginetta Junior championship this season. Moore has racked up more than 1500km in the car at Snetterton and Pembrey and was due to complete a further shakedown at Snetterton this week as AUTOSPORT closed for press.

Moore, 18, who built the prototype

himself and will complete all of the development driving with it, said: "The car is mega, I'm really impressed with it. It definitely feels like a mini-G50, which is good for those juniors who want to move up the Ginetta ladder.

"The restrictor plate [in the 1.8-litre Zytek engine] means the speed down the straights is about the same, but it will be quicker round the corners than the old junior car.

"We've had a few teething troubles but it's looking good."



Moore gave G40 its maiden run at Snett

Trofeo Abarth

Cadwell and Monza dates for new series

THE INAUGURAL

season of the Trofeo Abarth 500 GB will include a round at Cadwell Park and a finale at Monza after finalising its calendar last week.

The series will visit the home of the Italian Grand Prix on October 23-24 for a 'World Cup Final', which will feature drivers and teams from the equivalent European and Italian series and offer a combined prize fund.

Organisers have also tweaked the rules so drivers can drop one of

the seven rounds from their points total. It is hoped this will preserve the championship positions of those British competitors who cannot afford the trip to Italy.

The Trofeo Abarth 500 GB will also support British Superbikes at Cadwell on May 22-23. This will be the third round of the championship after races supporting British F3/GT at Oulton Park,

and F2 on the Silverstone GP circuit, in April.

The series will also visit Snetterton in June, July's Silverstone Classic meeting, and support the DTM at Brands Hatch on September 4-5.

Races supporting the World Touring Car Championship at Brands in July, and a mooted date at Spa have both been dropped from the original draft calendar.



Abarth GB drivers will tackle Monza chicanes

MARCUS PYE

HUMBLE PYE

The voice of club motor racing



Ex-Bruce McLaren mechanic Wal Wilmott races Begg JM1

That Formula Ford – the greatest single-seater training class in motorsport history – still thrills competitors and spectators the world over in its longest-serving Kent-engined guise is no mystery. But I was delighted to discover recently that it continues to grow in New Zealand, where its 40th anniversary is looming.

Until recently the Historic FF1600 class down there has embraced cars from 1970 to 1980 exclusively. Indeed a number of ingenious machines emanated from the islands during that heady decade to take on UK imports, but a move to invite '80s chassis to the fray has given the movement fresh impetus.

I love seeing local takes on familiar regulations, thus was pleased to re-acquaint myself with both the wonderfully sleek Hamilton-built Cheetahs (as opposed to the Australian F2 chassis of the same name), plus the Keram and a Johnston, but I was particularly taken by the first of the late George Begg's FF1600 designs.

Designated JM1 in deference to Jim Murdoch, who built and raced it, its story is told briefly but most poignantly by the brilliant Southland engineer in his book *A Classic World & When The Engine Roars*. This first-hand account highlights the extraordinary globe-trotting endeavours of Begg and his plucky acolytes in both two and four-wheeled racing, and should be read by all in this sport who, on reflection, have had it easy.

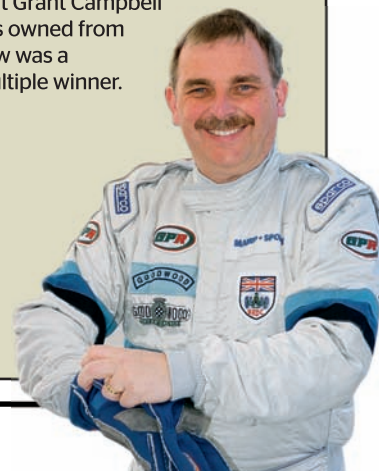
The JM1 finished second in two successive NZ championships, with Murdoch – who later piloted Begg's ultimate racer, the magnificent F5000 018 – and Brett Riley, whose skills were subsequently appreciated in Europe. Both were at Hampton Downs, where Bruce McLaren's faithful spannerman of the '60s, Invercargill's Wal Wilmott, raced the JM1 (now beautifully restored, having gone the way of so many used-up race cars).

Another bolide that caught my eye was the futuristic American-built ADF of Auckland Graeme Cameron, who fell in love with the David Bruns design while living in the USA. One of apparently 13, the '74 machine – which features inboard front brakes – was the forerunner of the all-conquering Swift DB-1, which rewrote FF1600's rules of engagement when RK Smith annihilated allcomers at the '83 SCCA Runoffs.

In fact, I was surprised to see the quickest early cars – Phil Foulkes' Palliser Trident and Ben Field's Elden Mk8 – skirmishing with the '80s set at both Hampton Downs and Pukekohe.

Then again, among the fastest of all were a Reynard 85F and a Van Diemen RF83 – both thought to be sows' ears at the time – and one of the rare pullrod-suspended Crossle 55Fs. Not only that, the Swift FB4 that Grant Campbell has owned from new was a multiple winner.

“I was delighted to discover recently that Formula Ford continues to grow in New Zealand in its Kent-engined guise”



Skip Barber

Clio champion heads Stateside

REIGNING RENAULT Clio Winter Cup champion Daniel Lloyd will switch from saloons to single-seaters this season after deciding to race in the 2010 American Skip Barber National championship.

Lloyd, 17, who finished third in the 2008 Ginetta Junior championship, his debut season in cars, before taking

11th in the 2009 Clio Cup, has made the switch on the advice of his new manager – GT ace Tim Sugden.

"There are more opportunities to open doors than in the UK, plus we've been offered an attractive deal," said Lloyd. "It's going to be tough to switch from saloons to single-seaters, but I'm confident in my ability to progress."



Blundell took pole by six seconds at Le Mans in 1990

Group C/GTP

Nissan pole-winner set for return

The car in which Mark Blundell took pole for the 1990 Le Mans 24 Hours will reappear in 2010

>> THE NISSAN that claimed a dramatic pole position for the 1990 Le Mans 24 Hours will race in the 2010 Group C/GTP series.

Historic regular Kent Abrahamson has purchased the Nissan R90CK in which Mark Blundell topped the qualifying sheets by six seconds at Le Mans 20 years ago. The Swede is planning a full programme in the six-date series with renowned sportscar preparation expert Phil Stott.

Abrahamson said: "It is a fantastic car with a great record – that's why I bought it. The car is arriving in two weeks and I can't wait to drive it."

The Swede, who has yet to decide whether he will race the car alone in the one-hour Group C races, dismissed the suggestion that his new mount makes him one of the pre-season favourites for race victories.

"I'm not really thinking about that," he said. "I'm doing it because I love it.

If I win races, good."

Stott said the car would be ready to race in the series opener at the Algarve circuit in Portugal at the end of April.

"The car has been fully rebuilt and is in transit now," he said. "When it arrives, all we have to do is put some tyres on it and off we go."

It will be the first time that the twin-turbo, V8-powered R90CK has raced in European historic events.

The chassis did not contest the 24 Hours in 1990, the last year that spare cars were allowed at the 24 Hours, and was subsequently displayed in the Le Mans museum. Henry Camferdam used the car in Historic Sportscar Racing (HSR) events in the United States before selling it to collector Aaron Hsu, who never competed in the car.

Organisers have confirmed round five of the Group C series at Brands Hatch will take place on July 31-August 1.

Formula Renault BARC

Hillspeed racers to win free drives

GINETTA JUNIOR newcomer Hillspeed will reward its drivers with free Formula Renault BARC drives if they achieve good results this season.

Richard Ollerenshaw's squad, which is still looking for a second driver to partner 14-year-old car racing debutant Seb Morris in one of its new Ginetta G40s, will offer its drivers a free entry into the 2010 Formula Renault Winter Cup if they finish in the top three overall in the championship.

In addition, each time one of its drivers finishes on the podium in one of the 10 double-header meetings, the team will reward them with a free day of Formula Renault BARC testing.

This means its drivers could win up to 10 days of free running in 2010. If the



Hillspeed will offer free testing

driver finishes inside the championship top three but is too young to race in FRenault BARC, Hillspeed will offer them "a suitable alternative".

Ollerenshaw said: "We see our new awards structure as a great way of providing our drivers with an opportunity to sample a single-seater and consider options for future years.

"We also hope it will prove attractive to any drivers still considering whether to race in Ginetta G40 this year – either young karters, like Seb, stepping up to cars for the first time or racers who have experience of Ginetta Junior.

"We're confident we'll hit the ground running and be competitive in our first season in Ginetta Juniors and these prizes are a great potential reward for drivers who join us."

Hillspeed has also joined forces with Wales-based GYG Karting to offer a test in a Formula Renault or a Ginetta G40 to the 2010 Dragon Kart Club Rotax Mini Max Champion.

The team currently runs two graduates of the club: James Theodore (in Formula Renault BARC) and Morris. Now it will offer a test to this year's top runner in the championship.

Scottish Formula Ford

FF1600 festival for Knockhill

THE FORMULA Ford element of the Scottish Motor Racing Club's annual Speedfair Meeting at Knockhill will be renamed the Scottish Formula Ford Festival.

Individual races for the Irish and Scottish FF1600 championships will remain on the two-day programme, alongside a separate practice, heats and final format for the Jackie Stewart Trophy.

Entries will be capped at 56 for the meeting, which will take place on June 26-27. The package includes races for Classic Saloons and Sportscars, the MG Cup, Equipe GTs, the Pirelli Ferrari Classic and Ferrari Cup, and Formula Junior.

There will also be a 30-lap, two-driver race for Mini Coopers.

IN BRIEF



BRITISH GT ace Michael Bentwood has confirmed a part-season in the series this season with Aston Martin squad Barwell Motorsport. Bentwood will drive a DBRS9 (above) with Paul Whight at the Oulton Park, Silverstone GP, Snetterton, Brands Hatch GP and Spa rounds of the British GT Championship. They are also expected to drive together in a Spanish GT round at Jerez and the International GT Open finale in Barcelona.

RENAULT CLIO Cup frontrunners Mike Robinson and Sam Tordoff will both return to the series this season with Total Control Racing. The squad has carried ex-Caterham racer Robinson to sixth in each of the past two Clio Cups, and ran ex-British karting champion Tordoff to a win and eighth in the points in his first season of car racing last year.

IF MOTORSPORT will run three Ligier JS49s in European VdeV this season for driver pairings Marco Saviozzi/Pierre Renom, Francis Galashan/Massimo Vignali and Cedric Berner/Andy McKenna. The sextet all tested at Albacete recently. Team boss Bryce Wilson is hoping to run two cars in the UK-based SPEED series alongside the team's European commitments.



ARCHIE HAMILTON, grandson of 1953 Le Mans 24 Hours winner Duncan, will switch from single-seaters to the Porsche Carrera

Cup this season. Hamilton, who will be 19 just before the start of the season, will race in the pro-am1 category for Red Line Racing and step up to the pro class in 2011. He tested with the squad for the first time at Snetterton last week (above).

THE BRITISH Racing and Sports Car Club has dropped the 'Club' name from its Formula Ford 1600 series. The National and regional championships will now be known simply as BRSCC Formula Ford 1600.

THE INAUGURAL Ginetta Junior Ireland series will take place over five race weekends this season. The new series, for 14-17-year-olds using the Ginetta G20 Coupe that preceded the new G40 in Britain, will kick off at Mondello Park on July 17-18. The competitors will also participate in demos at the Phoenix Park Motor Races on August 14-15.

Historics

Maserati birdcage to fly again

THE UNIQUE Maserati Tipo 61 streamliner, which Americans Masten Gregory and Chuck Daigh raced at Le Mans in 1960 under Lloyd 'Lucky' Casner's Camoradi banner, will be raced in a programme of high-profile historic events this season by marque enthusiast Willi Balz.

The first 'birdcage' was built in 1959. It was tested in two-litre (T60) guise by Stirling Moss, who immediately recognised the chassis's potential and suggested a three-litre upgrade.

The car received a bigger engine and was entered by Camoradi for the Nassau Speed Week sprints and 1960 Sebring 12 Hours.

Crashed on the Targa Florio, when Umberto Maglioli and Nino Vaccarella raced it, chassis 2451 was subsequently re-bodied with the huge and distinctive 'low drag' screen and long tail, following windtunnel tests by Alfieri Maserati. In that form it was the quickest of the three Camoradi entries at Le Mans until its engine failed.

Subsequently sold to American automobile radiator magnate J. Frank Harrison, and raced for him stateside by Jim Jeffords and Fred Gamble, the car later passed through numerous hands (including Bob Owen and Hexagon boss Paul Michaels) in the USA, before German Hartmut Ibing raced it in the 1990s.

British Maserati specialist Steve Hart, who prepared it for Ibing, has recently completed a full rebuild on the spectacular machine for Balz, who intends to race it at historic meetings in 2010, possibly including September's Goodwood Revival.



Three Camoradi birdcages raced at Le Mans in 1960

VLN

Vee champs to race G50

ANDRES SERRANO, the only Ecuadorian to have won a British racing championship, is to team up with two Germans and a rock star to tackle this year's Nurburgring Nordschleife VLN series in a pair of Ginetta G50s.

The 1995 UK Formula Vee title winner has joined the Kornmeyer brothers, Torsten (2008 European Formel Vau champion) and Dirk (runner-up in the same series). Victor Smolski, of German heavy metal rockers Rage, has also signed up.

Sportscars

Bradshaw joins Juno for Dubai

PORSCHE CARRERA Cup racer Tom Bradshaw is set to race Juno's latest VdeV-spec sportscar later this month in the Middle East.

The 2008 Formula Palmer Audi runner-up and 2009 Carrera Cup scholarship winner will compete in a round of the GulfSport Radical Cup at the Yas Marina circuit, the home of the Abu Dhabi Grand Prix.

The two 20-minute sprint races will form part of the support package for a round of the Australian V8 Supercar championship on February 18-20.

Bradshaw, 20, who has previous experience of VdeV in France and the UK, gave the car a shakedown run at

Bradshaw tested Juno at Oulton



Oulton Park last week.

"I want to make a career in sportscars, so any I can get myself in is going to be really beneficial," said Bradshaw, who hopes to return to the Carrera Cup for a second season in 2010. "There's going to be more space for drivers out in Dubai, so I want to make myself known out there."

Historic F2

Stretton steps up in ex-Laffite machine



Laffite used 742 to win once in 1974 European F2 series

EUROPEAN HISTORIC Formula 2 champion Martin Stretton is moving up to the 2-litre class this season.

Stretton has acquired the ex-Jacques Laffite March 742 from Tony Dunderdale, who last used it in 2008.

"It's a sound car, but we are totally rebuilding it and replacing the BMW engine with a Cosworth BDG," said the double Historic Formula One (nee

Thoroughbred Grand Prix) champion.

"Due to my [racing tuition] work at Pembrey this month it will be a struggle to make the first round, but I'm looking forward to racing it."

Portuguese Formula Ford racer Diogo Ferrao, whose Merlyn is run by Stretton's team, is to test Martin's all-conquering March 712 with a view to racing it in F2's 1600cc division.



Sprinting to success

The Alfa Romeo Alfasud Sprint of Tim Lewis keeps on getting better. By KEVIN TURNER

Alfa Romeos, particularly those from the 1970s and '80s, don't have the best reputation for longevity. Various reliability issues and the dreaded threat of rust have made some Italian cars of the period rather hard to find. But there are always exceptions...

The Alfasud Sprint of Tim Lewis should be familiar to regular club racegoers of the past 20 years. It's a perennial frontrunner in the British Racing & Sports Car Club's Alfa Romeo Championship and has gradually morphed into one of the most impressive tin-tops in club racing.

The car has always been successful, as more than 70 outright wins and numerous class titles attest, but last year its performance took a big step forward. At Snetterton Lewis lapped in 1m13.981s (he maintains he's done a 1m12s in testing), smashing his own lap record by over two seconds and outpacing his closest rival by nearly 10! That time is also within four seconds of a British GT frontrunner and less than two slower than the best BTCC time of '09.

At the end of the season, Lewis took the 380bhp front-wheel-drive coupe to

the Aston Martin Owners Club Super GT event at Silverstone. He qualified fourth, and fought the 650bhp Aston GT700R of David Ellis for the lead before retiring with transmission woes.

It's pretty impressive stuff for a machine that started off as a road car in 1981. Lewis got his hands on the then 1500cc Alfasud in the mid-'80s. "It was pretty rotten already," remembers the 46-year-old. "I used it as a road car and gradually made it less rotten."

After a couple of years in sprint events, Lewis took to the racetrack in 1991 – in the Alfa series. He'd already started developing the car and so went into the 1600cc Modified class.

"I wanted to lighten it as I was going along," he says. "It was something that didn't cost me any money!"

Lewis was not the sort to stop at taking something out, though. He soon took the engine up to 1600cc and gradually made more changes. "When I went onto slick tyres and got a limited slip differential in about '93 we started to win races outright," he says.

The engine was then uprated again, to 16-valve spec, but one of the biggest catalysts for change came in the form of

a huge shunt at Cadwell Park in 1997.

After a right-rear puncture in qualifying, Lewis fitted an old tyre for the race and forgot about it until reaching the Gooseneck on lap one. "It was like ice: I lost it totally, smashed it up and broke a finger," he recalls.

The car needed a new front end, and Lewis's repair efforts lost momentum to such a degree that he gave it to rival Adie Hawkins, whose highly-tuned 33 model has been one of the few Alfas to get near Lewis in recent years, to complete. Lewis says: "He did a load of modifications I'd wanted to do – like tubular front suspension and an integrated rollover bar to make it stiffer.

"Adie's had a big input. We both

Alfasud's career began in sprint events



KEY CLIP



Search on YouTube for 'Tim Lewis'

"It's never been the best at handling, but I thought it was relatively easy to drive until I saw the clip - there's a lot going on!" Lewis put a camera in his car for the Silverstone Super GT race at Silverstone last October. Watch him work as he takes the fight to rather more powerful machines - Aston Martin, Chevy Camaro and Ferrari.



Recent changes have cured rear-grip problem

MICK WALKER



MICK WALKER

Lewis's Alfasud has become a formidable racer



OLIVER READ

Lewis (right) has been an Alfa stalwart for years. This is '05

come up with ideas, hone them, and then put some on our cars."

Hawkins also helped him with a diff set-up to reduce the torque steer that is inevitable from a FWD 'puller' that has gone from 140bhp to 380bhp.

It took five years for the Sprint to reappear after the crash, but Lewis was soon winning again. And still the changes kept coming.

In the middle of the last decade he took it out to 1800cc and, less than two years later, that unit was replaced by a two-litre engine.

"Everyone thought 1800 was the biggest one of these engines could go, but I did the figures and then did it," he says. "I think it's safe at two litres - I don't plan to go bigger - for the time being. The aim has always been to improve the power-to-weight ratio."

The bigger engine has, of course, added weight. To keep to his principle Lewis started using carbon-fibre parts - wings, front spoiler, rear spoiler - during the noughties. It all means the car weighs a little over 800kg.

Despite all this, and always being a frontrunner, the combination had to wait until 2006 before lifting the

overall Alfa crown. "It was the only really concerted effort I've made - I often miss races," he says. "I wanted to do it then as the car was 25 years old, and so was the series."

"It's hard winning the overall championship in the modified classes because the guys in the lower classes are often more reliable."

You'd think that with all the development and success the car had experienced by then, there'd be few improvements left to make. But Lewis points to two key changes that then moved the car on to a whole new level, resulting in the blistering 2009 pace that brought another class crown.

"Putting the supercharger on and changing the rear tyres made a big difference," he asserts. "I could never get enough heat into the rear tyres as it's so light at the back. We tried Radical tyres and that helped a lot."

There's usually a downside as a car gets faster and faster of course, and reliability issues are now becoming the Alfasud's main foe.

"It has been more of a problem recently," admits Lewis. "The biggest hang-up is the gearbox. It was designed

for 1100cc and in the Alfa rules you have to keep the original gearbox casing - and it cracks. I've now modified a casing that will hopefully sort it out."

Lewis stresses that there are more standard parts on it than people think: "I've only modified it where I think I'm being held up." But it is now at the point where to develop the car further (a Radical gearbox is under consideration) could mean he finally has to leave the Alfa championship.

With the AMOC's Super GT series in trouble, however, he may be left with few opportunities to race, so the move is unlikely to come in 2010. What we may see is Lewis taking on the Dunlop Motorsport News Saloons series, pitting him against the likes of Rod Birley's well-developed Ford Escort Cosworth.

It may seem strange for one of the bosses of Aston Martin repairer and restorer Pugsley and Lewis to continue racing an Alfa Romeo, but Tim knows what he wants. "Every year I think about bringing an Aston out, but I think I'll have more fun in the Alfa," he says. "Half of the challenge is coming up with new things to do to the car. And it's never got slower." ❧

YOUR SAY

What you think of the motorsport news of the past week



Ugly, ugly, ugly...

Formula 1 cars just look plain ugly with these ubiquitous 'shark-fin' engine covers fitted. The FIA should ban them so that F1 cars can look like F1 cars once more. As for overtaking, why not dispense with all this chit-chat, bring back fat slicks and fat turbos. Then we can all go racing again.

Graham McEvoy by email

EDITORIAL CONTACT mail@autosport.com

Mark Glendenning made some interesting observations in his *Mind Games* piece in last week's AUTOSPORT. Strange, though, that he did not mention that Jenson has already been team-mate to a fiery former world champion at BAR (Jacques Villeneuve), and so will undoubtedly bring a lot to McLaren this season. The two contrasting styles will make for a fascinating season at Woking.

Paul Kray
Cornwall

It's great to see that one of the best, if not the best, drivers of all time is back in F1. Michael Schumacher was without doubt the top man at Ferrari for years and years, but now he's back where it all started at Mercedes.

I hope he wins the championship, but not as much as I hope he changes his helmet design back to his original one with the German colours. The red lid just doesn't look right any more to me.

Shaun Thorne
Yeovil

I find the printing of Brendan Budgen's opinion of Renault – and especially Vitaly Petrov (Letters, February 4) – insulting.

Robert Kubica has been rated by AUTOSPORT as one of the best F1 drivers of 2009, while only Nico Hulkenberg managed to finish ahead of Petrov in GP2 last season. Plus, the Renault engine helped Red Bull to finish second in the F1 teams' championship in 2009. Good luck to Renault and Eric Boullier – another GP2 graduate for the season.

Matthew Scott
Oxfordshire

In these days of budget caps and cost cutting, I may have found the answer. While reading a report on the 1963 French Grand Prix, Colin Chapman sent Jimmy Clark out on a set of Dunlop R6s that had already done three races.

Not only did Jimmy win the race, but he set the fastest lap as well. I wonder how many laps Lewis Hamilton could get out of a set of tyres nowadays, and whether Bridgestone could make them to last that long...

Greg Feltham
By email

AUTOSPORT.COM

TOP FIVE ON OUR WEBSITE

1. VIRGIN REVEALS ITS VR-01 CONTENDER
2. COMBINED TIMES FROM VALENCIA
3. ROSBERG SHOULD 'GET OUT' – BARRICHELLO
4. MERCEDES ROLLS OUT NEW CAR AT VALENCIA
5. MASSA ENDS FIRST TEST OF 2010 ON TOP

WIN!



ROAD ANGEL PROFESSIONAL CONNECTED

This week's star letter will receive a Road Angel Professional Connected – the world's only safety camera alert device to use GPRS/GSM update technology while you drive.

For more details on Road Angel please visit www.roadangelgroup.com. Please ensure that your full address is included on all correspondence.

CORRECTIONS AND CLARIFICATIONS

The BTCC track test promised in last week's magazine will now run in the February 18 issue instead.

The car that Renault released last week was only a mock-up, which meant there were some inaccuracies in our analysis. The main one is that the steering arm is not in line with the bottom wishbone, as Brawn in 2009, it's in line with the top wishbone.

It is the policy of AUTOSPORT to correct significant errors as soon as possible. Please note the issue date and page number when contacting us on autosport.editorial@haynet.com

THE LATEST GEAR

The most desirable new releases for motor racing fans: books, DVDs, models, art and gifts

STIRLING MOSS COLLECTION

From £25.99

stirlingmoss.com

The Stirling Moss Collection of casual wear has been created by talented US-based artist Nicolas Hunziker, a distant relative of Prince Bira whom Stirling raced against in his early years. The clothing is manufactured by US firm a2z Racegear, who produced clothing ranges under license for Carroll Shelby, the Ford Mustang, Steve McQueen and many more.

To win some of this superb kit, why not enter a free competition on Stirling's website? The top prize is a Monza hooded fleece, a signed photo of Stirling racing at Monza and a Spyder T-shirt. Five runners up will each win a Spyder T-shirt each.

For details on how to enter, check out www.stirlingmoss.com.



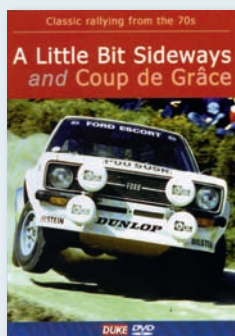
LEWIS HAMILTON BOOK

£5.99 (978 184299 751 2)

barringtonstoke.com

Pitched at seven-year-olds, the 'gr8reads' series has added the Lewis Hamilton story to its portfolio. The large-print text, written to encourage reading among junior-school-age race fans, is enlivened with amusing illustrations that chart the 2008 F1 world champion's career.

Cheap and cheerful.



1970s RALLYING DVD

£14.99 (62 mins)

dukevideo.com

A double treat for Ford Escort Mk2 and '70s rallying fans.

'A little bit sideways' relives the Blue Oval's dominance of the 1978 British Rally championship (1-2-3 for Messrs Mikkola, Brookes and Clark), while 'Coup de Grace' covers the 1979 WRC (one-two for Waldegaard and Mikkola).



CASTLE COMBE BOOK

£20 plus P+P

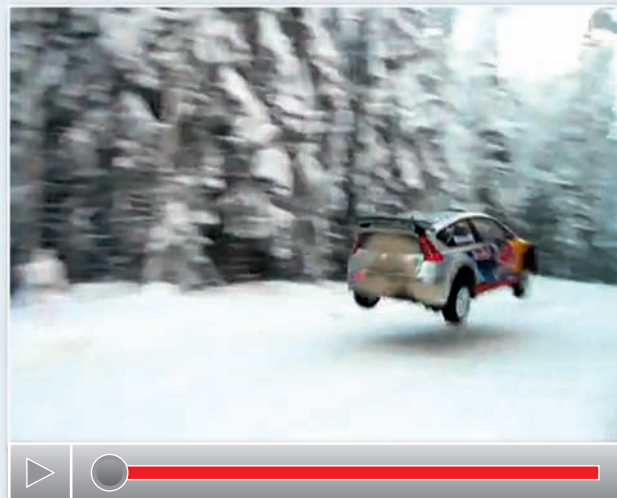
tfmpublishing.com

The superfast Wiltshire venue celebrates its 60th anniversary this year – as does AUTOSPORT of course – so magazine contributor Paul Lawrence and Peter Stowe have trawled the archives to bring us this fascinating track tale.

Full of memories and anecdotes, not to mention results and appendices.

HOT ON THE WEB THIS WEEK

YOUTUBE: RAIKKONEN READY FOR SWEDEN



SEARCH: Kimi Raikkonen Citroen C4 Red Bull (0:09)

It might only be nine seconds long, but this clip will leave you in no doubt about the commitment already being shown by the ex-F1 world champ. His right foot is hard down, as the rev limiter will attest.

WHAT'S ON...

Your guide to the best events taking place around the world this week – plus TV and online

GoMotorsport.net
Get racing. Get involved.

Sweden's snowy climes give the WRC a cool start



WORLD RALLY CHAMPIONSHIP

Swedish Rally
Rd 1/13
Karlstad, Sweden
February 12-14
www.wrc.com

The first round of the 2010 WRC, on the ice and snow of Sweden, is its fastest. Can Mikko Hirvonen make a winning start to his bid to topple Sebastien Loeb?

500 front row: Martin (5) and Earnhardt (88)



NASCAR SPRINT CUP

Daytona 500
Rd 1/36
Daytona, USA
February 14
www.nascar.com

NEW ZEALAND V8 SUPERCARS

Rd 5/6
Manfeild, New Zealand
February 13-14
www.nzv8s.co.nz

NZ TOYOTA RACING SERIES

Rd 4/5
Manfeild, New Zealand
February 13-14
www.toyotaracing.co.nz



FULL THROTTLE

What's grinding our gears this week

WHEN A YOUNG Jacques Villeneuve decided that it was time to create a helmet design, he sat down with a bunch of marker pens and scribbled until he came up with something he liked.

While the finished product suggests that Jacques might only have had four or five colours left in the box, at least it was distinctive. Villeneuve carried those colours through 10 seasons of Formula 1, and the design survived stints at five different teams without undergoing any significant change. It continues to do so: when the Canadian tried his hand at NASCAR, or floored the Peugeot's throttle at Le Mans, he did so in a helmet that was immediately recognisable.

The last thing the F1 press corps needs is another journalist talking about how much better things used to be, but there has been a definite – and, to my eye, unhappy – cultural shift in F1 where helmet liveries are concerned. Indeed, it's probably a stretch to even describe some of them as 'liveries' now, as that word implies a cohesive, unified theme, rather than a random assortment of colourful noise and shiny bits.

Assuming that you've been following F1 for more than a decade, hands up if you could draw a reasonable approximation of the liveries carried by Damon Hill or Heinz-Harald Frentzen or Mika Hakkinen. Now keep your hand up if you could do the same thing for the



Villeneuve's lid: only five crayons, but it works

lid used by Heikki Kovalainen or either of the STR lot last year...

I've no problem with drivers running new colour schemes on special occasions, as Juan Pablo Montoya used to do in Brazil. But it's depressing when distinctive schemes get adapted into oblivion (Fernando Alonso, Jenson Button, Rubens Barrichello, Kimi Raikkonen...

I'm looking in your direction).

The fact that some drivers still run helmets that represent themselves, rather than their sponsors, provides some hope that this might just be a trend. Meantime, we salute the likes of Mark Webber, Nico Rosberg and Lewis Hamilton for retaining a personal touch.

Mark Glendenning

Television

THURSDAY FEBRUARY 11

1115-1215 Eurosport

Daytona 24 Hours

The Eurosport schedule is about to get clogged up with curling and uphill skiing, but before all that Winter Olympics dross, here's another chance to see the Action Express crew take a famous debut win at the 2010 Grand-Am season opener.

1630-1730 Sky Sports 4

Race World

FRIDAY FEBRUARY 12

0000-0100 Sky Sports 4 & 1230-1330

Sky Sports 2

Race World

1115-1215 Eurosport

Daytona 24 Hours

2220-2325 Motors TV

WRC

Action from the (hopefully) snowy stages of Sweden as the 2010 WRC kicks off.

SATURDAY FEBRUARY 13

0105-0210, 0600-0700, 1000-1100,

1300-1400, 2220-2325 Motors TV

WRC

Daytona 500 is live on Sky



0210-0405 Motors TV

British Historic Rally Review

Catch Escort Mk2s and Porsche 911s threading their way through the forests.

0400-0425 Five

Motorsport Mundial

0900-1000 Dave

World Rally

A preview of the forthcoming season.

1300-1400 Sky Sports 4

Race World

2010-2115 Motors TV

V8 Supercars Preview

Jamie Whincup bids for a third successive Oz V8 title, but can he do it in a Holden rather than a Ford?

SUNDAY FEBRUARY 14

0105-0210, 0600-0700, 1000-

1100, 1300-1400, 2220-2325 Motors TV

WRC

1800-2200 Sky Sports 3 LIVE

NASCAR Daytona 500

It's Valentine's Day, so why not invite your loved one to an American-themed evening of romance (see below). And while he/she is whispering sweet nothings in your ear, you can look over his/her shoulder and watch four hours of live stock car action from Daytona's cathedral of speed. Bliss!

1800-1900 Dave

World Rally

A round-up of all the action from the first round of the WRC in Sweden, as Kimi Raikkonen joins the big boys of rallying.

2325-0030 Motors TV

V8 Supercars Preview

Online

AUTOSPORT.COM

Coming up on the web this week

F1 TESTING, WRC & NASCAR

The 2010 season comes alive this week on AUTOSPORT.com. Get the latest from the second F1 test of the year (right) at Jerez with our live updates, follow Kimi Raikkonen's progress on the opening round of the WRC in Sweden and get immersed in all the action from the Daytona 500 on Sunday.



Watch the latest race and rally action on AUTOSPORT.com

WRC: SEASON PREVIEW

WRC 2010 gets underway tomorrow (Friday) with the Swedish Rally – only the third time the all-snow event has been the season opener. Listen to Sebastien Loeb, Mikko Hirvonen and newboy Kimi Raikkonen on their thoughts for the year ahead.



REVVED UP OVER WHAT'S ON THE BOX

We cast a critical eye over the best and worst of this week's TV coverage...

If Michael Herck leads, and no one can see him on Eurosport, does he really lead?



"DER. DER. Duh... duh... duh... Der. Der. Duh... duh... duh..." The shrill guitar riff forever stuck in my head, like the catchy "Dab, dab, da-dab" chime that plays before public service announcements at French railway stations.

For seven minutes, I was subjected to Eurosport's ear-splitting signature jingle played over and over, as poor sods fell off motorbikes or crashed rally cars. *The best of Euro-crash.* The worst thing in the world, undoubtedly, when you're wondering if GP2 Asia is going to come on, relying on the oft-unreliable live timing to find out what the hell's going on.

It transpires that the reason us Brits couldn't see this was because some snowboarding event was over-running, and the Byzantine Eurosport empire couldn't switch one station to the live GP2 Asia coverage without them all doing so. Fair enough, given that the combined brainpower of Europe's scientists once spent two years failing to agree on a standardised type of electrical plug, it's no surprise that a pan-Euro channel can't get all the regions to agree to the same scheduling.

But was it really too much to ask for a note saying what was happening? God knows

when ITV had F1, if there was any delay to Corrie there was almost constant reassurance to indignant housewives who tuned in to find Lewis and Fernando in place of Roy and Hayley.

A race recap was attempted as we finally switched live to Abu Dhabi, but it was done so quickly that messers Haven and Rees in the commentary box were left breathlessly trying to keep pace with the savagely quick cuts.

Still, it was a blessed

relief to have the race at all, unlike the Bud Shootout, which required some nifty internet searching at 1am. Sky's decision to show the Daytona 500 live is great news – especially to Mrs Revved Up, who's being treated to a romantic US-themed Valentine's night in front of the telly!

Maybe if everyone who watches bombards them with a plea to show the remaining 35 races we can get our NASCAR back. It must be worth a try...

Revved Up

Maybe if everyone who watches Daytona on Sky bombards them with a plea we might get our live NASCAR back

THE WEEK IN PICTURES

The lensmen pounding the beat, from Florida to Abu Dhabi

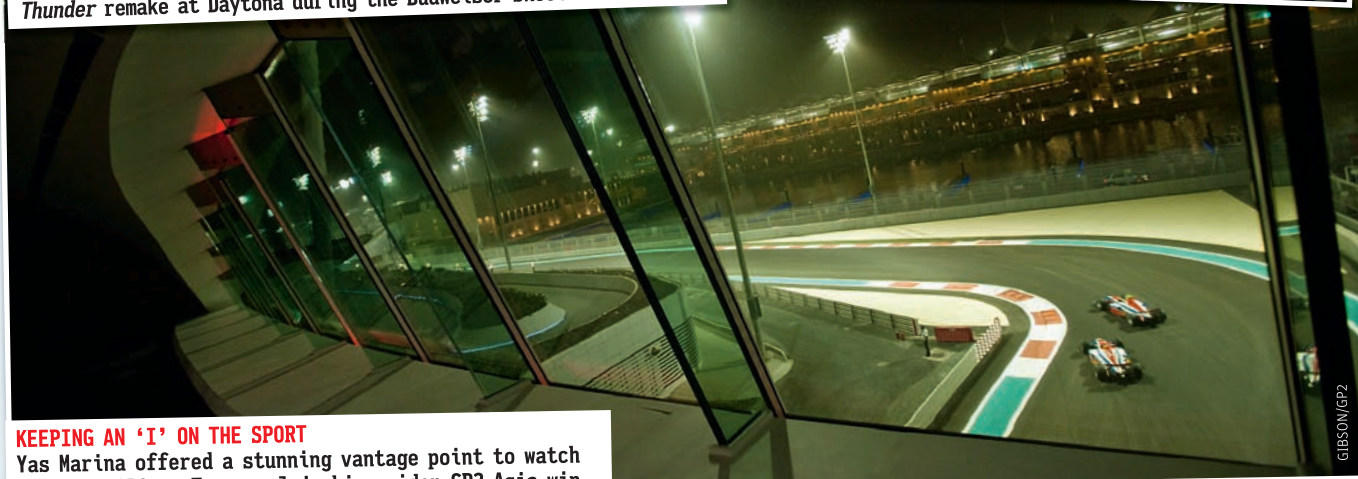


THE CAT AMONG THE PITCREWS

Is this ginger Tom (Cruise) attempting a feline *Days of Thunder* remake at Daytona during the Budweiser Shootout?

NEW KID ON THE BLOCK

Ken Block (centre) can't wait to get his claws into the WRC, but it looks as though his new pals got to him first



KEEPING AN 'I' ON THE SPORT

Yas Marina offered a stunning vantage point to watch iSport's Oliver Turvey claim his maiden GP2 Asia win

Engineering debrief – aero paint



GARY ANDERSON

BIO

Gary has designed grand prix race-winning cars during his long F1 career and worked for Brabham, McLaren, Jordan, Stewart and Jaguar.



WHEN A TEAM questions the performance of an aerodynamic component it is difficult to know where to look, as in reality all the surfaces are working as one.

One of the simple ways is to use flow visualisation – or aero paint, as it is sometimes known. A paraffin and luminous powder mix, when applied to some

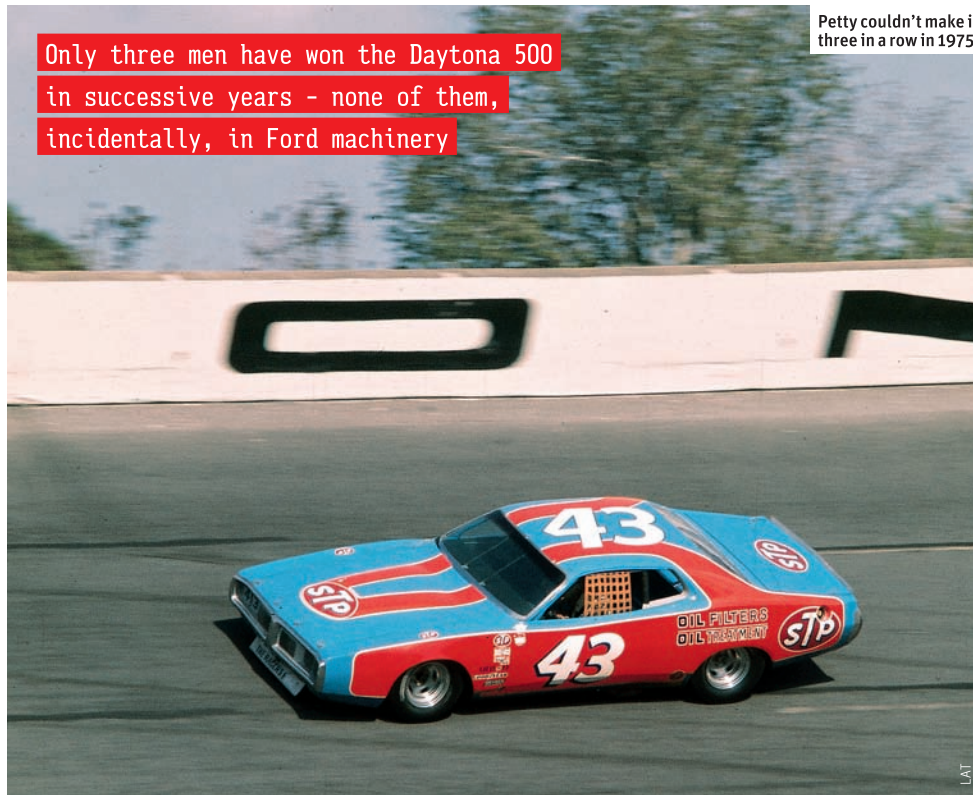
of the aerodynamic surfaces it will allow the team to inspect the flow characteristics in that area and check for any adverse airflow separation.

Normally a team would do this at a private aero test. For McLaren to do so at a public test is fairly unusual and suggests that the car has a problem.

Got an engineering question you'd like answered? Send it to mark.glendenning@haymarket.com

FROM THE ARCHIVE

1975 Daytona 500



Only three men have won the Daytona 500 in successive years - none of them, incidentally, in Ford machinery

Petty couldn't make it three in a row in 1975

MATT KENSETH will write his own little piece of NASCAR history this weekend if he can triumph in the Sprint Cup's blue ribband event, the season-opening Daytona 500. Only three men have won the event in successive years - none of them, incidentally, in Ford machinery.

The first to double up, Richard 'The King' Petty, triumphed in 1973 and '74, and arrived at the hallowed Florida oval in February 1975 as the defending Winston Cup champion, determined to make it three on the bounce.

Things started well. A pair of second places in the 125-mile qualifying races put his Dodge Charger, resplendent in full blue and orange STP livery, on the second row, and some skillful driving in the opening stages of the race saw Petty pull away by as much as 17 seconds at one stage, and hold station behind AJ Foyt's Chevrolet and Buddy Baker's Ford at others.

A delay at his second pitstop dropped him 11s behind Baker, but allowed the 100,000-strong crowd to see just how much speed he had. In only 15 laps he was on Baker's tail and challenging for the lead.

"And then the dang thing just stopped runnin' clean," said Petty, who was going for a sixth win in total at the 500. The reason was that a small crack had appeared in the Charger's radiator, but it took an unscheduled pitstop to discover it.

"We dropped a couple of laps then - we had to get the hood up," he added. "We had a couple more stops in the next 10 laps, so that was the race gone. At least we fixed the problem."

Indeed the Petty Enterprises team had, and once the famous number 43 car returned to the track - nine laps down - it would still have a major impact on the outcome of the race.

Petty, recovering to seventh, gestured to Benny Parsons to tuck his Chevrolet Chevelle into his slipstream in a bid to tow him up to leader David Pearson. He duly did, and when a pressurised Silver Fox spun down to fourth after clipping a lapped Cale Yarborough with three laps to go, Parsons was able to take victory.

Although Petty went on to take his win tally to seven before his retirement, neither he nor anybody else has managed three in a row - only Yarborough and Sterling Marlin ever came close. 

THIS WEEK IN...



FEBRUARY 8 1979

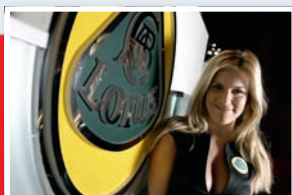
JACQUES LAFFITE continued his sensational - and surprising - start to the Formula 1 season by winning his second grand prix in a row in Brazil (above) from his Ligier team-mate Didier Pironi.

The Daytona 24 Hours was won by the Interscope Porsche 935 of Danny Ongais/Hurley Haywood/Ted Field (below) by a mammoth 49-lap margin from the Ferrari Daytona of John Morton/Tony Adamowicz.

Despite only qualifying eighth, the Interscope car hit the front after eight hours due to a high attrition rate at the front. Its only problem - a blown turbo suffered seven minutes from the end of the race - resulted in Ongais stopping 100m short of the finish line and waiting for the time to tick down before driving across it.



NEXT WEEK



Wraps come off new-look squad's first F1 challenger

LOTUS LAUNCH

Will famous name worry the big boys? *On sale Feb 18*

PLUS

Why Lotus died in 1994;
WRC opener from Sweden;
Daytona 500 - full report

KENNY BRACK

Indianapolis 500 ■ May 29, 2005 ■ Panoz GF09B-Honda ■ Fast and fearless after long lay-off



Brack flew at Indy – but was let down

I'D ALREADY turned down a couple of offers to do Indy, but when the chance with Rahal-Letterman Racing came along after Buddy Rice got hurt in a practice crash, I didn't have to think very long about it. The fire inside me had been burning really strongly since I'd become race-fit again [after 16 months of rehabilitation following a near-fatal crash at Texas Speedway in 2003]. It was just something I had to do.

There were no emotions for me when I got out onto the track for the first time. You just focus on the mundane things: the springs, shocks, rollbar settings and fall back into it. So it wasn't a great surprise on Bump Day when we lapped at nearly 230mph in a tow in practice. When I was in the pits, I said to my engineer that we could take some more downforce off and go even faster. He looked at me, grinning, and said: "I'm sure we can Ken, but we're not."

Then in qualifying the car was the best I've ever had at Indy.

I remember on the third lap, I got

"I had four or five degrees of opposite lock but it came back nicely and I kept my foot to the floor"

it slightly sideways in Turn 2 and scrubbed off a little speed. I had four or five degrees of opposite lock, but it came back nicely and I was able to keep my foot to the floor. That lap dropped half a mile an hour on my average speed, but the other three laps were perfect, so my average speed was 227.5mph

and the quickest qualifying lap of the year. I didn't even realise until I got out of the car.

It didn't put me on pole, or in the top 20, because those positions were locked in on pole day. I called [polesitter] Tony Kanaan, who was in New York celebrating, and he was surprised to hear what I'd

done. "Watch your mirrors," I told him. "I'm coming for you!"

You can never predict Indy, but I genuinely believe I had a winning car, and I'd made it into the top 10 early on. Then I had a mechanical problem and couldn't finish. A journalist asked me, 'Are you disappointed it was for nothing?' But I wasn't. After my accident I couldn't even walk, and took five hours of exercises every day for 16 months, so this felt like a victory before the race even started.

Indy proved that I still had the speed, and that if anybody was going to force my retirement, it was going to be me. ❏

Kenny Brack was talking to Jamie O'Leary

IN PROFILE



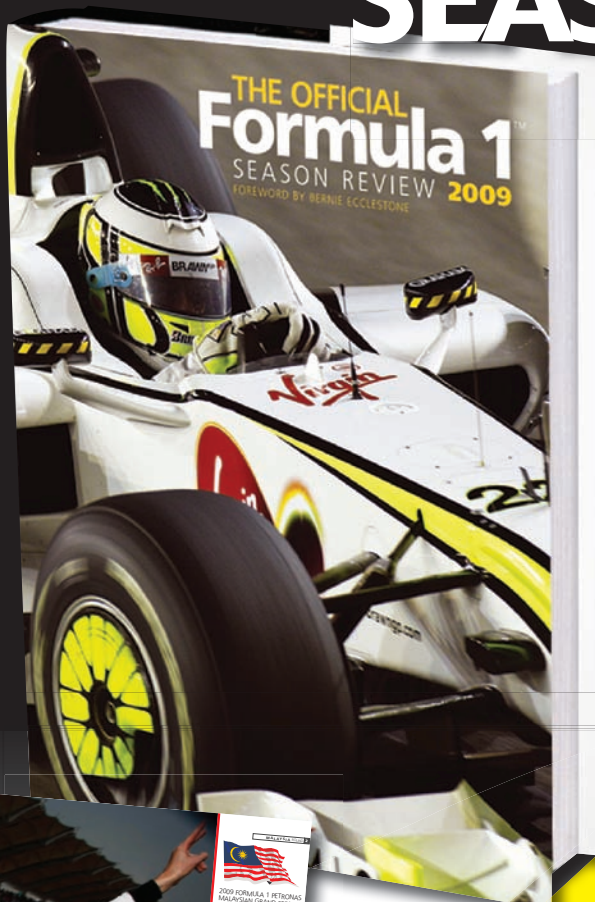
SWEDEN'S KENNY Brack is best known for winning the Indy Racing League in 1998 and the Indianapolis 500 a year later. He was a front-runner in Champ Car, winning five races and finishing second overall in the '01 series. Prior to that he won the Swedish Formula Ford, Scandinavian Renault Clio and Barber-Saab Pro titles. He retired in 2005 and now manages the career of GP2 racer Marcus Ericsson. He still competes sporadically and won the rally section of the X-Games in 2009.

NEXT
WEEK

John
NIELSEN



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