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THE REAL ALONSO

UNDERSTANDING F1'S MOST ENIGMATIC DRIVER

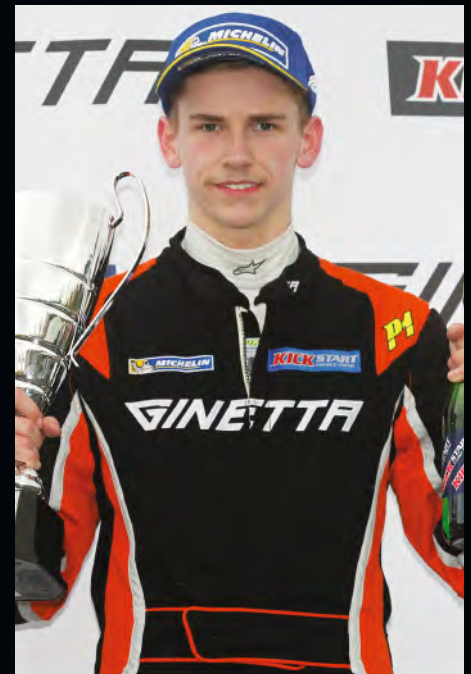
“In F1 there is the need to play a role, like in a movie”

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POLE POSITION

Seeing through the many faces of Alonso

FERNANDO ALONSO IS MANY DIFFERENT THINGS TO many people. You will be hard-pushed to find a driver whose reputation is so multi-faceted. There are even some, astoundingly, who argue that he is not a great driver...

Ben Anderson's in-depth story on Alonso is far more than a typical interview. Through interrogating those who know Alonso best – including the man himself – we begin to see through the cracks in the facade and glimpse the forces motivating him.

It's astonishing to think that his second and most recent world championship title was back in 2006. Has any driver operated at such a high level for so long without taking a title? During the past eight seasons, there have been three near misses. Had history swung the other way, we'd already be talking about Alonso as a quintuple world champion! And could you really argue that he isn't worth another title or three?

He won't say as much, but the third title seems to be the one he really wants. Right now, McLaren-Honda is a long way off giving him a car capable of winning... so he is dependent on the Anglo-Japanese alliance to propel him to that third – last? – crown.



EDD STRAW EDITOR

edd.straw@haymarket.com

@eddstrawF1

AUTOSPORT PERFORMANCE

“Don't kid yourself with zig-zagging. Its value is limited and it didn't happen at all until 1971”

Rob Wilson

FREE INSIDE THIS ISSUE



FIND US ON



Cover image: Adrian Myers

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This week in F1



STALEY/LAT

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START FEARS FOR SPA

This weekend's Belgian Grand Prix will answer doubts over the FIA's new regulations relating to start procedures, which come into force for the Spa race.

Drivers will no longer receive assistance from the pitwall when it comes to pulling away once the five red lights disappear; instead

they will have to work out for themselves what will be required for a clean getaway. All this at a track with a short run into the La Source hairpin, which is famed for spectacular collisions such as that triggered by Romain Grosjean in 2012.

Although believing the change "to be a good thing" overall, world

champion Lewis Hamilton has already suggested the starts could be "disastrous" and the FIA may quickly have to revise the rules.

Mercedes motorsport boss Toto Wolff agrees with his driver, saying: "We wanted to make the starts more variable and unpredictable, to give more responsibility to the driver

and make it look less 'remote control' from the garage.

"But is it going to cause drama beyond expectations? If so then it will need to be looked at again and adjusted. What none of us wants is completely unpredictable starts for everybody, which then devalues qualifying."

Ecclestone wants Renault to return as a works team

Formula 1 commercial boss Bernie Ecclestone has called on Renault to revert to being a works team.

Renault has grown frustrated with its current relationship with Red Bull and the criticism received in the past 20 months since the introduction of the 1.6-litre V6 turbo hybrid power units following four years of unbridled success at the end of the V8 era.

Now it is weighing up whether to continue as an engine manufacturer, quit F1 altogether or, as appears

most likely, return to its old base at Enstone and take over Lotus.

Ecclestone would prefer the Enstone option, saying: "I'd like them to take over Lotus, or start a new company on their own.

"I'd rather not lose them because they've been with us a long time and they are easy people to deal with, nice people, there are no dramas anywhere.

"It's just a case, from their point of view, of how much it is worth to them."



DUNBAR/LAT

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

Honda aims to match Ferrari

Honda is targeting racing Ferrari from this weekend's Belgian Grand Prix, and taking on Mercedes in the near future.

McLaren stars Fernando Alonso and Jenson Button will use the Japanese manufacturer's latest power-unit update at Spa.

The MkIII-spec includes a revised internal-combustion engine, featuring changes to the combustion chamber, intake, exhaust and gear-train system.

Honda motorsport boss Yasuhisa Arai said: "Spa is the final upgrade

for this year, with ancillaries to follow in the following race [September's Italian GP].

"MkIII [will be introduced] at Spa and we have already started development on next season's power unit.

"MkIV will be on the same level as Mercedes, that is the target; MkIII will be on a level similar to Ferrari, which is what we're aiming for. It's a big step."



STALEY/LAT

Pirelli budget matches F1 team

Pirelli's annual spend in Formula 1 is equivalent to that of a midfield team, says the company's motorsport director Paul Hembery.

It is understood that the Italian company spends in the region of \$110 million per year on development and distribution of the tyre supply to all the teams and sponsorship.

Hembery said: "People

don't understand our net costs of being present.

"We don't get anything from the commercial rights holder, so our net cost is greater than [everyone] except the engine manufacturers.

"You could certainly run an F1 team on our budget."

The next F1 tyre deal is due in 2017, with Pirelli and Michelin in contention.



NO FURTHER NEW ENTRIES

The Formula 1 grid will have to wait for further expansion beyond the arrival of Haas next season.

Although two prospective new entrants submitted bids following calls from governing body the FIA for

expressions of interest in May, neither passed the due-diligence process.

The FIA, which declined to divulge the identities of the unsuccessful applicants, "now considers this round of applications to be closed".

THE FATE OF THE PAST FIVE START-UPS

YEAR	TEAM	CURRENTLY
2010	Lotus	Closed end of 2014
2010	Virgin	Racing as Manor
2010	Campos	Closed end of 2012
2010	USF1	Never raced
2006	Super Aguri	Closed May 2008



DUNBAR/LAT

F1 PREVIEW

BELGIAN GRAND PRIX

August 21-23



CIRCUIT INFORMATION

SPA-FRANCORCHAMPS

LENGTH 4.352 miles NUMBER OF LAPS 44



2014 POLE POSITION Nico Rosberg

2m05.591s

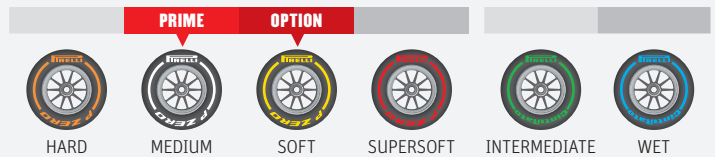
QUALIFYING LAP RECORD Mark Webber

1m45.778s (2010)

RACE LAP RECORD Sebastian Vettel

1m47.263s (2009)

TYRE ALLOCATION



UK START TIMES

LIVE ON BBC AND SKY SPORTS F1

FRIDAY

FP1 0900 FP2 1300

SATURDAY

FP3 1000 QUALIFYING 1300

SUNDAY

RACE 1300

BBC 5 live and the BBC Sport website will offer live coverage of all sessions.

PREVIOUS WINNERS

2014	Daniel Ricciardo	Red Bull
2013	Sebastian Vettel	Red Bull
2012	Jenson Button	McLaren
2011	Sebastian Vettel	Red Bull
2010	Lewis Hamilton	McLaren
2009	Kimi Raikkonen	Ferrari
2008	Felipe Massa	Ferrari
2007	Kimi Raikkonen	Ferrari
2006	No race	
2005	Kimi Raikkonen	McLaren

THEMES TO WATCH



CLUTCH STARTS

Race starts now in the hands of drivers as they will now receive minimal pitwall assistance. Could lead to a chaotic start.



HONDA POWER

Honda introduces its final major power-unit upgrade for the year, claiming its new engine will put it on a par with Ferrari...



MORE MALDO WOE?

Pastor Maldonado landed penalties in Hungary for three separate incidents. Can the Venezuelan keep it clean this weekend?

RICK KELLY
Photo by: Rick Kelly



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Lawrence Barretto

From the paddock

It's well known that Ferrari is interested in Valtteri Bottas, so his next moves could prove his ambition – and make or break his Formula 1 career

It would take a brave man to turn down Ferrari when an opportunity arises at Maranello. Some might even say it would be career suicide. But this is the potential dilemma facing Valtteri Bottas. No formal offer has been made but Ferrari is interested. Should the Scuderia come calling with a deal, what will Bottas do?

Staying put at Williams would be the safe, sensible decision. Williams rates him highly and, given that the team gave him his break in Formula 1 in 2013, he will undoubtedly feel loyalty there. He is comfortable in his surroundings (something that should not be underestimated given team-mate Felipe Massa's rejuvenation following a move in the opposite direction), has a team around him that is letting him flourish, and drives a car capable of challenging for podiums and possibly victory if all the pieces fall into place.

He also remains an unproven talent. Bottas is super-consistent, makes considered and calculated decisions and rarely commits blunders, but is he ready to make the next step and win races? Bottas himself thinks so and is convinced that when he's in a position to fight for victory, he can be more aggressive and take more risks to make it happen. The less-pressurised environment at Williams gives him a good chance of realising that dream.

But this potential opening isn't at just any team. This is Ferrari. There's something about the Prancing Horse that tugs on a driver's heartstrings in a way that rival

the widespread belief that he is a future champion.

There would undoubtedly be pressure on the young Finn's shoulders at Ferrari, and it would be pressure of a magnitude he has yet to face. But while Ferrari's resurgence has been impressive this season, it remains short of being the class-leading car and, with the relative stability in the rules into next season, you have to assume that Mercedes will remain top of the pile.

So while Bottas would be expected to win races and score podiums next season at Ferrari, a title tilt might not be possible. Equally, if Ferrari drops back, then provided Bottas performs favourably against Vettel it would do his reputation no harm – in fact, if anything, it would enhance it just as it did Ricciardo's last term.

Bottas has options not only for next season but also the future. Williams wants him to stay, McLaren and Mercedes are possible destinations, and Ferrari could afford to wait another year for Bottas if they determine that he is not ready just yet.

But things change quickly in Formula 1. Timing is everything. Drivers do not get to choose when they want to move. They get chosen. And with limited seating availability at the big teams, opportunities are few and far between. Almost as quickly as you are thought of as the next big thing, you can find yourself out of favour. Just ask Romain Grosjean and Nico Hulkenberg.

If Ferrari offered Bottas a seat and he turned it down, he may find that the team moves on and turns its

“If Bottas makes the Ferrari move, he will find himself with the challenge of partnering Vettel”

teams could only dream of. There's no doubt this would be the high-risk strategy. While there have been those who have been lured to Ferrari in the hope of winning the title and succeeded, the list of those who have pulled on the red racesuit and endured misery is longer. For every Michael Schumacher, there is an Ivan Capelli.

If Bottas makes the move, he will find himself with the daunting challenge of partnering four-time world champion Sebastian Vettel, who is excelling in his new surroundings. But considering Bottas has yet to win a race, any move to a big team at this stage of his career will pit him against a strong team-mate since he has to deliver the results to warrant the tag of lead driver.

Bottas has no reason to be fearful. Daniel Ricciardo showed last year that Vettel can be beaten and Bottas has so far shown huge talent and mental strength, proving he is strong enough to face up to the consequences when things go wrong. Ferrari would give Bottas the perfect chance to continue backing up

attention elsewhere. Bottas's chance of a drive at Ferrari could be gone, while other seats at big teams may be occupied. At 25 he is not old, but younger drivers such as Esteban Ocon and Pascal Wehrlein are itching to get into F1 and could take priority.

This may sound dramatic, but Valtteri's next step could make or break his career. Yes, the decision could be taken out of his hands should Ferrari choose not to buy his contract from Williams (which has an option to retain Bottas for at least another season) and keep Kimi Raikkonen in play.

But if an offer is made, Bottas has a chance to be bold and prove he has the guts to seize the opportunity. It would mean more than just accepting a seat at a team – it proves his ambition. It's time for him to press on and go for it. The move could go wrong, but the rewards make it a risk worth taking. If he doesn't, it would be akin to him not fighting all-out for a win when it's on. And that would be far worse, career suicide even. ❧

This week in motorsport



HULKENBERG FOR RACE OF CHAMPIONS

Le Mans 24 Hours winner Nico Hulkenberg will make his Race of Champions debut at London's Olympic Stadium on November 20-21. He will join four-time world champion Sebastian Vettel in Team Germany's line-up. "I'm obviously stepping into big shoes to replace Michael Schumacher," he said.

88



Lappi on WRC team wishlists

Skoda's Esapekka Lappi is the driver at the top of rival teams' shopping lists for next year's World Rally Championship.

The 24-year-old Finn, the reigning European Rally champion and who leads this year's WRC2 standings, is under contract with Skoda, with a longer-term agreement reckoned to be in place with Volkswagen to move him into a Polo R WRC, possibly as early as next year. Lappi's management is also understood to have an offer from Citroen and talks ongoing with Toyota Gazoo team manager Tommi Makinen.

Lappi's manager Erik Veiby told Autosport: "We are very happy he's on the list of some teams, as we understand. All I can say for now is that he remains a Skoda driver."



'Live' FanBoost vote on cards

Voting for FanBoost during Formula E races could be introduced as early as season two of the FIA's electric-vehicle championship.

Series boss Alejandro Agag has long talked about his desire to allow fans to vote for the power hike awarded to three drivers while the race is taking place rather than ahead of each event.

The FIA and Formula E are now known to be working on plans to make those ambitions reality in time for the 2015-16 season, which kicks off in Beijing on October 17. Formula E sporting manager Benoit Dupont said: "We can expect changes to the way FanBoost is implemented, but we are still working on them with the FIA and its legal department." FanBoost is also set to go from a

five-second power hike to 180kW to a three-second increase to 200kW.

A new 'superpole' session is also likely to be introduced. The fastest driver in each of the four mini-sessions would go forward into a shoot-out for the top-four grid spots.

Formula E testing continued at Donington Park this week, with Daniel Abt (pictured) fastest on Monday and teammate Lucas di Grassi quickest on Tuesday.

DONINGTON TIMES

1	Lucas di Grassi (Abt)	1m29.920s
2	Daniel Abt (Abt)	1m30.250s
3	Sebastien Buemi (e.dams)	1m30.382s
4	Bruno Senna (Mahindra)	1m30.670s
5	Nick Heidfeld (Mahindra)	1m30.674s
6	Nicolas Prost (e.dams)	1m30.677s

LAPIERRE IN AGURI TEST

World Endurance star Nicolas Lapierre (below) made his Formula E test debut at Donington Park with a Monday appearance for Team Aguri, and hopes to know "soon" if he will be part of its 2015-16 line-up.

Lapierre logged 60 laps before GP2 racer Nathanael Berthon took over the team's Spark SRT_01E on Tuesday.

All three drivers to have appeared for the team in the official tests so far – Lapierre, Berthon and Tom Dillmann – are being evaluated and a decision will be made before next week's final test. Salvador Duran is favourite for the other seat.



For all the breaking news, visit AUTOSPORT.COM

Rowland gets extra GP2 shot

Formula Renault 3.5 Series leader Oliver Rowland gets his second GP2 Series chance in this weekend's Spa round.

The Briton, who is a stablemate of Jack Harvey (see right) in the Racing Steps Foundation scheme, will once more link up with Dutch team MP Motorsport, with which he scored points last month on his GP2 debut at Silverstone.

"It's another great opportunity for me to show what I can do," said Rowland. "I've driven the car now, and I've raced at Spa already this year [taking a win in the FR3.5 round], so I reckon I'm probably on a par with everyone this time around – podium finishes are the target."



S. BLOXHAM/LAT



HARVEY TOPS INDY TEST

Indy Lights series leader Jack Harvey was fastest of the rookies in a special IndyCar test for drivers from the feeder series at Sonoma last Thursday.

Unofficial times put Briton Harvey, who was testing with Schmidt Peterson Motorsports, sixth-fastest overall in the morning session and quickest of the non-regulars, narrowly edging out Nelson Piquet Jr (Penske) and Matt Brabham (Andretti). Also taking part were Harvey's main Lights title rival

Spencer Pigot (Penske), Sean Rayhall (Ganassi), Ryan Phinny (KV) and Ed Jones (Rahal Letterman Lanigan).

"I loved every minute of it," Harvey said. "This car is so much bigger, so much more power. It's still a race car, but the power and the weight of the car and the size of it were the things I noticed straight away."

The test gave teams a final chance to gather data ahead of the track's double-points season finale.

Fontana dropped for 2016

Fontana will not be on the IndyCar schedule in 2016 after the series and track failed to settle on a date.

The southern Californian two-mile oval suffered poor TV ratings in 2014 due to the evening start being too late for east-coast viewers, while the desert

heat of this year's earlier start deterred trackside spectators.

Despite the loss of the superspeedway, the 2016 calendar could still have the same number of ovals as 2015, with Phoenix thought to be close to confirming its return.



HILL/LAT

STCC keeps silhouettes

The Scandinavian Touring Car Championship will continue with its current silhouette-bodied, Solution F-built racers for at least one more year.

STCC organisers have been eyeing the British-spec NGTC cars and the new TCR formula, but technical chief Jan-Ake Stigborg said BTCC cars are too expensive and TCR is still unproven.

The move comes amid uncertainty as to whether Volvo will continue in the series for the 2016 season.

In brief



MCKEIN

WILKS BACK IN MINI

Britain's Guy Wilks will rejoin the World Rallycross Championship for next month's Loheac round in France in JRM Racing's Mini. Wilks (above) qualified for the final on his WRX debut at Lydden in May. He is joined at JRM by fellow rally ace Guerlain Chicherit, who will also contest October's round at Franciacorta.

ANDRETTI LEGAL SNAFU

Andretti Autosport boss Michael Andretti is facing a legal battle from within his own organisation after being sued by the two minority shareholders in Andretti Sports Marketing. Long-time Andretti lieutenant John Lopes and fellow ASM co-owner Starke Taylor filed a suit against Andretti Holding Company claiming that the race team is insolvent. Andretti has vowed to "aggressively fight" the suit.

SWINDELL INJURED

Sprint car star Kevin Swindell suffered a spinal injury in a crash at the Knoxville Nationals last week. Swindell has competed in many forms of oval racing, including NASCAR's Xfinity Series, and has amassed 77 wins across various disciplines. He is the son of sprint car icon Sammy Swindell.

FA1 MID-EAST PLAN

Formula Acceleration 1 could return with a Middle-East-based series this winter if plans of the Dutch organisers reach fruition. The ISRA is planning three rounds in January and February for the old A1GP cars, with the GP circuits in Bahrain and Abu Dhabi among the venues targeted. FA1 ran for one season of five race weekends in Europe, in 2014.

SEKIGUCHI AT B-MAX

Leading Japanese Formula 3 team B-Max Racing is to run 2011 JF3 champion Yuhi Sekiguchi for the remainder of the season and, it plans, the Macau Grand Prix. Sekiguchi, now a Super GT driver, was fourth in Macau in '11.

BIG NUMBER

200

That's the number of races targeted next year by US dirt-track star Bryan Clauson, topped by his third crack at the Indy 500. He will stay with the Jonathan Byrd's Racing team for Indy.

CASSIDY GETS PREMA SEAT

Japanese Formula 3 Championship leader Nick Cassidy will contest the next two F3 European events with top squad Prema Powerteam.

The New Zealander has been given permission by leading Japanese team TOM'S to step into the Prema

berth vacated when Brandon Maisano split from the squad earlier this month during the Red Bull Ring round. Cassidy will race at Algarve and the Nurburgring, but will miss the Hockenheim finale as it clashes with the Japanese series climax at Sugo.

Cassidy has contested four European F3 rounds in the past, with three different teams.



THE REAL UNDERSTANDING F1'S M

Somewhere between reality and myth, the real person behind the two-time world champion's public

A close-up, high-contrast photograph of a man's face, focusing on his eyes and hair. The man has dark, slightly messy hair and is looking directly at the camera with a serious expression. The lighting is dramatic, with deep shadows and bright highlights on his skin and hair.

ALONSO

MOST ENIGMATIC DRIVER

persona is to be found. **BEN ANDERSON** attempts to cut through the rumour and untangle the threads



JOHNNIE WALKER

JOHNNIE WALKER

JOHNNIE WALKER

JOHNNIE WALKER

PIRELLI

SAP

Mobil 1

Honda



W

ho is Fernando Alonso? He is a double Formula 1 world champion, of course; a Spanish sporting idol, undoubtedly; and he is one of the very best racing drivers of his generation, arguably. But others would say he is perhaps a ruthless operator, always placing his own needs above those of his team; possibly a voracious political animal, saying anything to advance his own cause, whatever the consequences; and potentially a Machiavellian megalomaniac, prepared to crush all who stand in the way of his irrepressible will to win.

Fernando Alonso is many things to many people, depending on allegiance, perception, caricature and misconception. This is true of all sporting stars. How you act, and the actions attributed to you, defines you; it becomes you. You cannot escape it, whether it is true or not.

What follows is an attempt both to transcend and confront the preconceptions surrounding one of F1's biggest stars. It is an attempt to understand what defines one of motorsport's most enigmatic and complex personalities. It is a journey to find out who Fernando Alonso *really* is.

THE DRIVER

Alonso is, above all, a racing driver. This is the most pertinent starting point, for it is through this prism that most perceive him.

Alonso is not just any racing driver, though: he is a world champion twice over and the winner of 32 grands prix, which places him sixth on the all-time list of victors. Statistically speaking, that makes him a *great* racing driver. Like all greats, Alonso possesses a level of skill for his chosen profession that leaves an indelible mark on those who cross his path.

December 2000. The Circuit de Catalunya near Barcelona. Fresh out of his rookie Formula 3000 season (and his second in total in cars), Alonso is having his first test for Benetton-Renault, the F1 team with which he will win his two world titles (in its Renault guise).

Williams technical boss Pat Symonds, then at Benetton, remembers well the impression Alonso made.

"When he first tested for us it was the staggering consistency he had which really surprised me," says Symonds. "It was pretty obvious he was a little bit different to a lot of new guys who we got in the car. The sort of skill he had in driving a car fast actually didn't actually develop much, because it was at a very high level.

"In those early days we didn't quite appreciate some of his other qualities; he is a clever guy, which maybe we didn't quite figure out straight away. He's very laid back, and this can mask the intensity sometimes. Often in a briefing you would look at him and would think he wasn't paying attention, and then he would ask an incredibly pertinent question, which meant not only was he paying attention, but digging beneath what had been said.

"And there's a lot of spare capacity when he's driving. In 2003 he set the fastest lap in the Canadian Grand Prix, and during that lap he was talking to us nearly all the way round about some aspects of the race. A lot of drivers slow down when they get on the radio, or they don't like being spoken to. We were having a conversation and he set the fastest lap of the race."

Speaking to those who have worked closely with Alonso, it is clear they feel he has a fierce intellect that sets him apart from his peers. Being able to drive quickly is a given; what makes one particular driver better than another is usually an ability to optimise the minute details.

For Andrea Stella, Alonso's race engineer at Ferrari from 2010 until both left for McLaren at the end of last season, it is Alonso's ability to delineate precisely between his own and the car's contribution to the overall performance that marks him out.

"I had to fight against Fernando in 2006, so I was very curious technically – and also because of my passion for this sport – to see how he was professionally and also as a person," says Stella, giving a rare interview in the higher reaches of the McLaren-Honda motorhome.

"The first time it was very positive, as has been our collaboration throughout the years. He was technically very prepared, but it was not like he wanted to know everything or wanted to check everything. He gave straight away quite a lot of trust to his engineers and trust in people around him. I was surprised. I was expecting him to be very fussy, but he was very relaxed and open-minded. This was a good starting point straight away.

"Through the years Fernando has improved and his achievements have been extraordinary. He's very charismatic, so he is very talented from this point of view.

You see the pleasure in the guys who work with him. They love him. It's the combination of his skills – technical skills, because as an engineer there is a strong interest to learn the details of going quickly, and with Fernando he is particularly interesting because he has an awareness of his contribution and the car's contribution.

"He knows when he's driving around problems, and if you then

capitalise on this quality as an engineer you can become stronger. This is one of the reasons why we performed strongly in most of the races we have done.

"I worked with Michael Schumacher and he was so naturally talented, sometimes it was difficult for the team to understand that he was driving around the problem and what the car limitation was, so sometimes you could be in completely the wrong position following what Michael was suggesting. With Fernando, normally it was not like this.

"I've always thought that he is much cleverer than me. If he had studied instead of spending most of his youth going around with go-karts, his achievements from an educational point of view would have been better than a lot of people who are now engineers." ►

"He set fastest lap of the race while talking on the radio"

The idea of Alonso going back to McLaren was once unthinkable

Alonso's last F1 win
was in May 2013



EMERINGTON/LAT



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THE WINNER

Champion sportsmen are a special breed. They possess intense determination, an obsessive compulsion for winning, and a vitriolic hatred of losing. In this regard, Fernando Alonso is just like any F1 world champion.

For Alonso, this motivation is “not only in F1; in everything I do. If I play football with friends, and I lose, maybe I don’t talk to them for a week! I want to create a new team, or talk with other friends that might play better. And when I’m all set, I talk to them finally after two weeks, and say, ‘How are you, maybe we play again?’ I don’t like to lose at anything.”

The obsession is extreme, some may say unhealthy, but this is a big part of the reason Alonso has been so successful and why McLaren was so desperate to re-sign him for its new works partnership with Honda for 2015.

“I think I met him in 2002 during a test session,” recalls McLaren racing director Eric Boullier, who spent a large part of last season convincing Alonso to swap Maranello for Woking. “Today he is the same – he’s just older, more experienced and more self-confident. He’s somebody very normal. The only difference he has to the rest of the world is that he is on top of his skills. It’s more than determination; he has a *need* to win. It’s like somebody needing oxygen to breathe. This guy needs a win. If he doesn’t win, he is fading.”

This means Alonso must be struggling for vitality now, given that he hasn’t won a world title for nearly nine years, and his last victory came in the 2013 Spanish Grand Prix, 33 races ago...

This can lead to tension in his working environment, which can potentially become destructive if left unresolved.

“To be a winner in this sport you have to be a fighter,” explains Stella. “I don’t really trust those who want to look

like angels. When you want to look too much like an angel, there is something behind it so I start to mistrust. So just be yourself. This [honesty] is part of Fernando’s character, which can make him difficult to deal with sometimes.

“I’m not here to say that Fernando is an easy one to manage but, when he trusts you, you need to understand that he trusts you and this is a massive commitment. I always go around with my notebook because when he said something, even if we were playing basketball, I’d take a note. I always use his input, and I make sure he gets an answer. He might even forget that he said that, but we will come back to it.

“He is not going to tell you twice. He is going to tell you once. With Michael it wasn’t like this. He would tell you, and if he saw it was not happening he would tell you another time. He might even call you. Fernando will not call. Maybe that’s a limitation.”

This is a trait Alonso seemingly shares with his former Ferrari teammate Kimi Raikkonen, who is known for being simple and straightforward

to deal with, but not particularly demanding of the teams he races for. It runs counter to popular perception, which suggests Alonso is the sort of character who overbears a team, and tries to mould it around him with constant machinations behind the scenes.

Stella says Alonso is actually very happy to leave his colleagues to get on with their jobs. Trouble only arises when they don’t do those jobs properly, or worse, try to cover their tracks in the aftermath...

“You have to make sure you are very logical in what you say, and very well informed,” Stella adds. “Sometimes with him, if you don’t understand a couple of good rules you may end up in trouble. You need to be on top of your game.” ▶

“Obsession is
a big part of
the reason for
his success”

The most successful years came with Renault



ALONSO'S F1 CAREER



2001

Astounds the paddock with rookie displays for Minardi. Eleventh in the season finale, two laps clear of team-mate Alex Yoong, marks him out as one to watch.



2002

Takes a year out from racing to test for Renault. Alonso credits the 32 days of driving he did that year as the key to his subsequent success in F1.



2003

Graduates to the race team in place of Jenson Button and scores his first pole and podium second time out in Malaysia. Adds maiden win from pole in Hungary and finishes sixth in the points.



2004

No more wins, but he improves to fourth in the championship in a season of Ferrari dominance. Pole and second in France are the highlights. He also leads at the Belgian Grand Prix until an oil leak intervenes.

THE VILLAIN

Does a penchant for rancour explain why Alonso has seemingly fallen out with every team he's driven for (Minardi excepted) in Formula 1 over the past 14 seasons? His first spells at Renault, McLaren and Ferrari have all ended amid some degree of acrimony.

Is it because these teams failed to deliver to the high standards Alonso demands of the team and of himself? You could probably only fairly make that argument about Ferrari, given that Alonso spent five seasons at Maranello without winning a title and came nowhere near doing so after 2012.

He left Renault as a double world champion; at McLaren in 2007 he could easily have taken a third, despite obvious tension in the background. But for a couple of small twists – a different strategy call at the 2010 finale in Abu Dhabi, or Sebastian Vettel's miraculous non-retirement from the 2012 decider in Brazil – Alonso could also easily have won two titles at Ferrari.

Success, in one form or another, was nearly always there. So does this history of ending working relationships on a negative note spring from something more fundamental? Pat Symonds reckons there is possibly some flaw to Alonso's personality that can create problems.

"People will remember 2006 in Japan," he recalls. "We were fighting hard for the championship, we were all under a lot of pressure and all working incredibly hard at the time because our competitiveness against Ferrari was decreasing.

"It was a really, really hard one, and the effort that everyone at Renault put into it was unbelievable. And then in Japan, totally out of the blue on the Thursday, Fernando did a press conference and just laid into the team and slagged them off. It was devastating for the team. He lost a lot of friends that year.

"I've worked in many situations, whether it be for championships or even for race wins or important positions within the championship, and I've never come across that type of character at any other time."

Eric Boullier offers a different perspective. He reckons that the fracturing of these relationships is just the inevitable product of prior success. What goes up must come down, so to speak.

"The problem you have is that it is always a cycle," he explains. "You build something, you build momentum, you're successful, but to keep winning is impossible. There is always an end. With his [Alonso's] character – and Robert Kubica for me is exactly the same character-wise – it's true that when the momentum is coming up it works, but as long as you have this down-spiral coming, and as long as people then hide behind bushes, the trust is broken. Then the mess starts, and this is why he fell out with Renault and with Ferrari.

"McLaren was a different story; it was more a cultural problem. I can see it – I'm French. I'm sitting between Italy, Spain and England. Sometimes you can feel there is something lost in the translation. It's not always a meaning; sometimes it's the details. Some words and body language sometimes may hurt the other culture.



There were ructions during Alonso's first stint at Renault

"As long as he feels people are clever enough, pushing, delivering, it's very important for him. This is why he loves this place. When he rejoined here, if you ask him privately and he trusts you enough to tell you what he thinks, he will tell you there is no bullshit at McLaren anymore. Now we are honest, transparent, and he knows this.

"He knows his power. He's a driver. With the fans, he's always with them. The team will always be the bad boy and the driver the good boy. This is why he may have played with us in the past. But as long as you deliver the performance and he can see your commitment and determination is right, then you have his full support and his full commitment."

Trust, commitment, culture. These environmental factors are crucial for Alonso to thrive at a team. It is also fair to assume the 34-year-old Alonso we see racing today is not exactly the same as the 25-year-old one that so offended the Renault team at Suzuka in 2006, or the 26-year old who fell out with Ron Dennis the following year. Alonso has matured. But the man himself believes negative characterisations of the end of his Formula 1 relationships are overblown.

"This perception is just what the media wants to sell," he argues. "With McLaren the first time, it is true that we weren't comfortable together but that doesn't mean we had huge problems or we became enemies forever.

"The clear example is that I am here again driving, and there are more or less the same people in the team. Now it's time that we fit together.

"It's like when you meet a girl, sometimes you know when you are 15 years old that you are not well together, but maybe at 25 she's the woman of your life. Different stages of your life, different stages of your maturity and of your career, maybe fit with different teams.

"With Ferrari it was probably the biggest surprise, because I had five fantastic years. I had a great relationship with the top bosses. I still go into Maranello, to the restaurant, and then there is this rumour that it didn't finish well. I don't know why. As we said before, I don't like to finish second, at any sport or anything I do. And I felt that after five years, I finished second too many times.

"This was probably enough. If we did two more years finishing second or third, it would create some tension or stress. [I said to Ferrari] 'I'm so happy with you, we had a fantastic time. You will find new motivations with new drivers, and I will find new motivations with another team, and we will forever have great memories.' That was the decision I took, and now it seems like we ended up in a bad situation, but [the truth] is completely the opposite.

"I have Ferraris in my garage, I keep a good atmosphere. I'm young, and who knows, one day I can return to Ferrari again. Once you are inside Ferrari, your heart will always be a little bit with them because it is special. The Italians and Spanish are very similar, so we understood each other from day one. I was comfortable and, as I said, it was a fantastic time. But enough."

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"Once you are inside Ferrari, your heart will always be a little bit with them because it is special"



Poor strategy in Abu Dhabi 2010 cost Alonso the title

THE HERO

Mention the name 'Fernando Alonso' to Carlos Sainz Jr and the young Spaniard's eyes light up. Alonso is a hero for Sainz, someone whom he has admired and aspired to emulate from a young age.

From watching Alonso's exploits on TV and reading about him "every morning" on the back pages of the Spanish newspapers as a child, the young Sainz became something of a protege for Alonso.

They first met at the 2005 Spanish Grand Prix, when Sainz's father (World Rally champion Carlos Sr) took his son to see Alonso. Alonso recommended the younger Sainz take his baby steps with Genis Marco – the same Spanish kart importer who educated Alonso when he started racing.

They stayed in touch, and their relationship has morphed from hero-worship, to mentoring, to friendship, and now to becoming rivals on track thanks to Sainz's graduation to F1 with Toro Rosso this year.

"In 2010 I watched the World Cup final in Ferrari's hospitality at Silverstone," says Sainz Jr. "I was still looking up at him like my hero. I had won my first single-seater race [in Formula BMW] and Spain had become world champions, and I was watching with my idol and hero.

"In GP3 [in 2013] I got to know him a bit more and now he gave me lots of advice. When I did my first race in World Series in Monaco, he came to me and said, 'We are going to do a lap on a scooter.' We went on the Wednesday and he told me all his secrets.

"My first ever race in World Series, and my first ever laps around Monaco, and I was P1, P2, P1, P2, P1, P2, always like that! After, Helmut Marko [Red Bull motorsport consultant] came to me. I was not having a very good start to the GP3 season and then I turned up with an oh-so team [and had this result]. It made a massive difference to my career.

"If you look at our on-boards in Monaco they are quite similar. I still do exactly what he tells me."

Alonso is also an icon in his native Spain. He is far and away the most successful Spanish single-seater driver in history, and that makes him a pioneer, a legend.

"What he has achieved, I know how difficult it was when I jumped into the rally community and I'm sure he was in the same situation," says Sainz Sr. "To win the world championship like he did, and to be recognised as one of the best-ever F1 drivers, if you look back in our country that was something completely impossible.

"Sometimes he is very direct, and when he tries to protect himself this generates some animosity. There are people who attack him, but these people, with the internet, are anonymous. Unfortunately, in Spain this can happen when you are very successful.

"His image is worse than the reality. He is very shy and that is why sometimes it's like he is defensive, but when you meet him he's actually very funny – and he loves card tricks and magic. Sometimes, he is overprotective of himself and it would be good for the people to know him a bit more.

"In a few years, when he retires, everybody will realise how big he was as a sportsman and as a driver."

The Sainz family paints a picture of Alonso as a kind, generous, funny and entertaining individual, at odds with the

serious, ruthless, unfeeling caricature many would draw to describe world champions such as he.

For Sainz Jr, both images have some element of truth. "There are two Fernandos there," he suggests. "Fernando is a real winner, and all real winners have this selfishness you need to have. He is very clever, he has a lot of experience and he pushes for what he wants because he knows he is going to benefit. Then you go to dinner with him and he's not in the work environment; he cannot stop joking, asking about your life and caring about you. I have seen it.

"He knows how to separate the selfishness inside his work from his real personality." ▶

"He's actually very funny – he loves card tricks and magic"

Alonso was first a hero, then he became a mentor and then a friend to Sainz Jr



XPB IMAGES



2005

Becomes world champion for the first time as the Ferrari/Bridgestone alliance is undone by tyres that must last an entire race distance. Kimi Raikkonen's McLaren is generally faster, but more fragile than Alonso's Renault. Signs deal to join McLaren for 2007.



2006

Makes it back-to-back world titles after a close battle with a resurgent Michael Schumacher and Ferrari. Limp home after winning six of the first nine races and falls out with the team in Japan.



2007

Rookie sensation Lewis Hamilton becomes the only team-mate to beat Alonso in the title race (on second-place countback) so far, as Raikkonen and Ferrari steal the crown by a point. Alonso quits the team at the end of a controversial year.



2008

Returns to Renault, looks demotivated until the R28 comes on strong. Wins controversially in Singapore and then on merit in wet at Fuji.



Massa leads the infamous
2010 German GP before
handing the lead to Alonso

THE TAKER

Perhaps Alonso feels the need to behave a certain way to get the most out of himself in Formula 1's cut-throat world, but leaves that version of himself behind when he walks out of the paddock gates. That would explain why former Ferrari team-mate Felipe Massa has a rather different view of him.

"It's amazing how intelligent he is at understanding the race, to see how well he uses the car, to see how good he is at using the tyres. Fernando is so complete, the biggest problem is that the way he works is very political," argues Massa, Alonso's Ferrari team-mate from 2010-13.

"He's not so honest with the way he works, very selfish, and sometimes that doesn't help him. He managed to get the team completely on his side, so the team did not respect what I was saying and was not working for both drivers.

"It's very difficult to understand Fernando. I've never had a problem with him, he was always kind, but in a way that you don't understand whether he's really kind, or he wants to be kind. He has a personality that you cannot trust."

Massa feels the pressure Alonso puts on the teams he drives for creates friction in professional relationships. He

suspects this is what happened to Alonso first time around at McLaren and at Ferrari. It's a point Symonds supports.

"He's a bit of a loner; I don't think the team is important to him other than what it can bring him," Symonds explains. "There are times in life when you don't necessarily do the best thing for the day, you do something for the long game. I don't think that comes onto Fernando's radar at all.

"When he came back to Renault in 2008 he'd got himself into a position where the only thing he could do was come back, which is something he does time and time again; he leaves himself without options. We've been talking about how clever he is, well in life he's not that clever..."

Perhaps Alonso simply doesn't care about these fleeting professional ties. Maybe they are a means to an end.

Race engineer Stella has arguably been closer to Alonso professionally than anyone over the past five seasons. He says Alonso is always completely open to begin with, but is capable of going to darker places if he feels trust has eroded.

"I have never seen him starting a new thing or a new year protecting information or creating unnecessary tension," explains Stella. "You need to understand him, treat him with a lot of respect; you don't have to be superficial.

"Sometimes I think, 'You're giving this information to your team-mate?!' but if he sees that his team-mate is doing the same he will do the same. It is not like he will be a little bit political or will be fighting to the limit at the beginning, but if you are superficial he will do it as a response. It's reactive, it's protective, and if he enters this mode he can really be very tough."

Alonso himself says that, "I forgive, but I don't forget"...

"You definitely need to know who you are dealing with, because they [champions] are not normal people, they are the selection of the selection of the selection," continues Stella. "And we have seen in the history of Formula 1, in soccer, everywhere, that these kinds of champions can all have a sort of dark area."

"We have
been talking
about how
clever he is.
In life, he's
not that clever"



Massa (right) finds Alonso
difficult to understand



Alonso is an ambassador for UNICEF and plans to start his own charity

THE GIVER

For all that Alonso may be willing to trample team-mates and teams if he feels it necessary to achieve what he wants, or fight fire with fire in the ultra-political world of mind games and subterfuge that exists just below F1's surface, there is also a kind and generous human being there.

Carlos Sainz Jr alluded to it and, although success in Formula 1 clearly demands Alonso to behave selfishly and egotistically at times, he is also prepared to give back to the world. That he recognises this while living through it is to his enormous credit.

He is an ambassador for the children's charity UNICEF, and has also helped provide scholarships for Spanish students to study motorsport engineering at Oxford Brookes University. He also recently started his own kart racing school in Spain, and has plans that are currently "pieces in my head" to start his own charity in the future. He is also domiciled in Spain, rather than adopting one of the financially efficient tax havens so beloved of his

fellows among the F1 breed and the super-rich.

"The sport gave me more than I expected and doing something for other people makes me happier than any other thing," he says. "Personal life is what counts and makes me happy. Formula 1 is a very nice sport, because the technology here and the cars you drive are fantastic, your salary is better than in other places, but at the end of the day it's just a job.

"Sometimes, when they ask me about this race, or another race, or a world championship, it is true that maybe you could be more happy in that moment to have an extra trophy at home, but that trophy is just your own ego in five or 10 years' time.

"You will have kids, family, different jobs, different projects in the future, and you will have some memories from this third of life that you spent in motorsport. You will have 97 trophies, or 101, but it doesn't matter too much. Your happiness is somewhere else." ►



2009

Renault struggles with return to slicks and introduction of double diffusers, but pole in Hungary and podium in Singapore are a boost, before Ferrari decides to pay Raikkonen *not* to race in 2010 so that Alonso can join the team.



2010

Wins on Ferrari debut in Bahrain and leads the championship heading into the Abu Dhabi finale, where a poor strategic call gets him stuck behind Vitaly Petrov's Renault and hands the title to Red Bull's Sebastian Vettel.



2011

Scores five more points than in the previous year but ends up a distant fourth as Vettel dominates. Opportunistic victory at Silverstone is Alonso's highlight.



2012

Not Ferrari's most competitive season, but Alonso wins three times and remains in title contention until the final race, when Vettel somehow survives a first-lap accident with Bruno Senna to take the crown by three points.

THE MAN HIMSELF

Alonso's view on his own character is revealing. He seems very self-aware, conscious of the nature of the circus that surrounds the sport in which he earns his living, and the need to participate in that circus in a way that is not necessarily compatible with his own personal values.

"I know who I am outside F1, but that remains a question mark for everybody because I like to separate my personal life from my professional life," says Alonso, who adds that he "doesn't care" how he is perceived by those outside his inner circle. "In F1 there is the need to play a role sometimes, like in a movie. Sometimes it is pushing the team towards one direction; sometimes it is helping a team in another political issue; some of the time it's giving some motivation to the fans; some of the time you try to put some stress in your opponents. This is the normal thing you do every weekend.

"I'm very different [away from the circuit]. I'm sure that people are very surprised, but also here the perception is not easy to get right. At the end of the day, you watch a sportsman for 30 seconds on the television, on the news after a two-hour race at 160bpm [heart rate], losing two or three litres of water. You see that man for 30 seconds and you get an impression.

"If I was in a comedy programme, and you see me for 30 seconds doing a magic trick or saying something funny, then after those 30 seconds, you'd say, 'This guy is a very

nice guy.' Then if you see the other guy sweating and finishing a race where he was fighting until the very last lap, you see him and say, 'This guy is a little bit closed and a little bit strange.'

"That's probably the biggest point about sportsmen in general, and particularly F1. There is stress, there is adrenaline in the car, there is media attention, there are many things around that probably from the outside you get the wrong perception. Outside, I am a completely normal person, trying to enjoy time with friends."

Alonso says he finds it "very difficult or nearly impossible" to reconcile these two personalities.

"Honestly, I'm trying to be myself all the time and not trying to put on a different mask every day, but it's a hard world," Alonso admits. "We race for 19 weekends a year, but the rest of the year

you are publicly exposed for everything. You represent big car manufacturers, you represent big images, you do many things that are of big importance, and you need to follow the book; you need to follow the recommendations, the rules, the right message for the right people.

"Maybe to one guy you say one thing, maybe to one guy you say different things. So everyone hears what they want to hear, even if it is not what I feel. This is not what I'd do if I could, to be honest. I try to accommodate to that, but it is difficult to be yourself here." ▶

"I'm trying to be myself, not trying to put on a mask"

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Q&A

ANDREA STELLA

ALONSO'S RACE ENGINEER

How do you get the best out of Fernando on a given weekend?

Preparation. Make sure you go over all the things that are needed, and then once you are clear in your mind you start dealing with the tyre.

At the same time in preparation I always try to take advantage of Fernando's experience and his cleverness. Then we put it together. Sharing the information is important, making sure he is driving something he's convinced about. I don't think you have to do special things, just share information with the rest of the engineers so we create an environment where everybody's aware of what our targets are, how we want to achieve them, what Fernando is thinking, and then you have to make sure his psychological attitude is positive and this requires a lot of attention.

You have to be in your job even when you are not working. It is very demanding but this is the point; you are on your sofa and you keep thinking about your work. As an engineer you have to have a capacity to predict because sometimes the driver can do something that you didn't really expect.



Stella worked with Alonso at Ferrari and moved with him to McLaren in 2015

It does seem he is a bit stronger in races than sometimes in qualifying.

In the races you have to balance what you have because you don't have infinite resources. This is why, if we give F1 much more grip, this will not be much more selective. It's selective now, even though I don't like this F1 that is so slow that when you see the car it doesn't give you the thrill of speed like in the past.

But drivers now have to deal with imperfections. The time they spend on the grip limit is much larger, so now the duration of a corner is much longer than it was in the past. The time the car is in wheelspin is much longer, the time the car is in braking is much longer, the time you have to recover from a lock is much less because there is much less

downforce. The duration where a driver can make a difference is much longer.

In terms of Fernando's driving style, has it changed much since you've worked together and does he have a specific way of driving? Supposedly he's quite sensitive to braking stability, because he likes the car to be quite predictable so he can brake late.

This is what every driver wants; the difference is the capacity to deal with imperfections. So his capacity is not to maximise the car when it's perfect, but to maximise it when it's imperfect. This happens through the awareness, through the technical baggage, and his technical capacity has improved.



Alonso says "it is difficult to be yourself" in the glamorous F1 circus

2013

Wins two of the first five races and scores consistently, but then Vettel romps to a fourth successive title with three races to spare. Alonso is admonished by Ferrari for criticising the team and openly flirting with Red Bull.



2014

Alonso rates this season as his best ever in terms of his own performance, and he trounces returning team-mate Kimi Raikkonen, but the F14-T is a poor car and Alonso leaves Ferrari at the end of the year.



2015

Rejoins McLaren for the start of its renewed works engine partnership with returning manufacturer Honda. The car has been uncompetitive so far, but Alonso has scored points in the past two races, including a season's best fifth in Hungary.



**“I know who I
am outside F1,
but that remains
a question mark
for everybody”**



Alonso idolised Senna
and has driven one of
his McLaren-Hondas



THE HERO OF A HERO

Ayrton Senna is a Formula 1 idol to many around the world, and Fernando Alonso is no exception.

The double world champion grew up as a young boy in Oviedo, Spain, watching the feats of the late, great triple world champion aboard the iconic red-and-white McLaren-Hondas of the late 1980s and early '90s.

Having become part of the reformed McLaren-Honda alliance for this season, Alonso is on a journey that he hopes

will end with him emulating his racing hero, by winning a third world championship with the partnership.

“Winning a third title would be very nice. I don’t know if that will be possible or not, but winning the same number of titles that Senna did would be very special,” says Alonso. “And starting at the level we start: this is the very bottom, and one day if we arrive to the position of winning a championship would be

a massive achievement.”

For now Alonso can only dream, just as he did when he was a child. The enduring power of sport is the ability of its heroes to inspire a younger generation. That’s what Senna did for Alonso when he was racing.

Alonso has spoken before of how he used to play with a toy model of a Senna McLaren-Honda. Now that he’s driving a McLaren-Honda of his own it completes the circle of his F1 career.

SO WHO /S FERNANDO ALONSO?

So who is Fernando Alonso? Carlos Sainz Jr summed it up best when he said “there are two Fernandos there”. That’s not to suggest that Alonso suffers from some sort of personality disorder, merely that he feels it necessary to behave differently in his professional and personal environments.

In this way he is similar to most people around the world; the difference is that his work is televised and, because he is one of the best in his chosen profession, everything he says and does is analysed in microscopic detail.

That is the inherent pressure that comes with being a multiple world champion and global superstar. Alonso’s characterisation of himself as an actor in a movie is apt, and he plays the part beautifully. He is prepared to be the villain when necessary.

He is clearly highly intelligent, and – like all those who excel in their chosen career

– prepared to put noses out of joint and burst egotistical bubbles in order to achieve better results. His self-confidence is such that he can easily deal with the consequences of that approach.

That doesn’t mean he is beyond reproach, for his way of working can have negative consequences. But to him that is simply part of the game.

And it really is a game to him. Because of this, your view of Fernando Alonso and who he is will depend on how you see F1. But listening to him talk about what’s really important to him – his life away from racing – you realise he is just like you, or me, or anyone else for that matter, just a normal bloke, searching for happiness in life. The famous Steve McQueen quote: “Racing is life, everything else is just waiting” does not apply to Fernando Alonso. There is much more to him than that. ❧

Maximum race power
is being raised from
150kW to 170kW



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Formula E's new powertrains

With testing of the new powertrains well under way ahead of the all-electric championship's second season, **GARY WATKINS** explains how opening up the rules will shake up the order

New rules almost inevitably mean new technical solutions. And in the brave new world of the Formula E Championship that means a variety of different approaches.

The opening up of the powertrain regulations for the second season of the FIA's electric-vehicle series will result in a number of configurations racing against each other when season two of the championship begins in Beijing on October 17. Some Formula E machines will have one electric motor and some will have two, while the cars from the 10 teams are set to race with between one and five gears.

The reasons for the different approaches are three-fold: a cap on the power of the motor remains; the resources available to the teams vary; and, perhaps most important of all, no one has the definitive

answers in what is the world's first EV racing series.

The solutions stretch from Team Aguri's decision to stick with the spec one-make package of season one and retain the McLaren Electronic Systems motor and

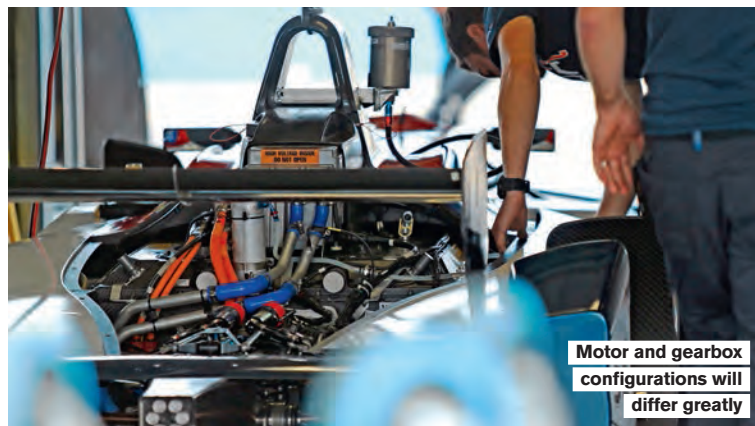
five-speed Hewland gearbox, to that of the DS Virgin Racing squad. The British team, which has linked up with Citroen sub-brand DS, hasn't disclosed details, but it is firmly hinting that it has gone further than its rivals. Expect it to announce a

twin-motor set-up with only one gear, really a differential, when it does reveal all.

Aguri team boss Mark Preston, a former principal designer at the McLaren Formula 1 team, points out that Formula E is unique in international motorsport in that power is limited and not just the energy allowed to create that power.

"Our basic calculation was that the races are going to be most likely the same number of laps, and the energy from the battery is staying the same," he says. "If you look at the difference in the energy usage across the grid in season one, there was a bigger margin than the efficiency gains you are going to be able to make with the motor in season two."

The big question is whether the limitations presented by the twin caps on power and energy –

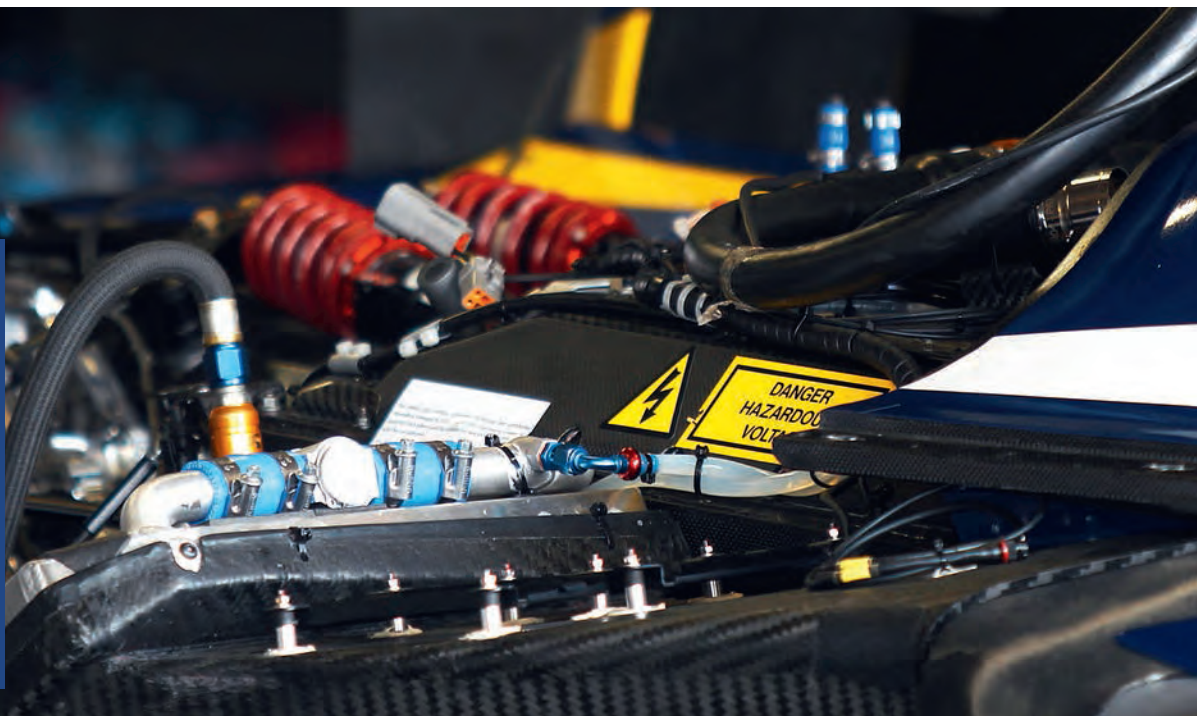


Motor and gearbox configurations will differ greatly

Some teams will run two motors, others just one

“We don’t know all the answers. Time will tell who is right”

MARK PRESTON



maximum race power is being raised from 150kW to 170kW, while the energy from the battery remains at 28kW/h – will allow the innovators on the grid to steal an advantage. DS Virgin Racing chief technical officer Sylvain Filippi thinks so.

“In theory, if you are power limited you can only go so far,” he says. “But in reality it is the opposite. Gains in efficiency will translate directly into performance. The more efficient you are, the less lifting [coasting to conserve energy] you will have to do.

The instant torque provided by an electric motor would appear to point to a gearbox-less set-up as being the optimum. There is an obvious weight advantage, and no time-consuming gearchanges are necessary.

It is not as simple as that in Formula E, however. The rules dictate that the motor or motors must drive the rear axle through a conventional mechanical differential. That negates much of the benefit of running without a gearbox, and is the exact reason why the FIA demanded a differential. Direct drive from each of two motors would have allowed for torque vectoring to aid handling, a complexity that the governing body was keen to avoid in the fledgling series.

“That was the death of the two-motor solution for us,” says Andretti team boss Roger Griffiths, whose cars will be running a single motor developed in the US by Houston Mechatronics and a four-speed Hewland gearbox in 2015/16. “The nice thing about two motors is that you can control them independently for torque vectoring.”

The other factor is that the eight Formula E manufacturers – really

seven of the teams plus Renault – that registered for the right to produce their own powertrains for 2015/16 have to work within the existing architecture of the Dallara-built SRT_01E chassis.

“If you want your motor package to be nice and small, with a very low centre of gravity, you end up with a high-speed motor that needs more gears,” says Griffiths, who points out that fifth gear was used infrequently during the first season of Formula E.

Achieving the necessary torque to dispense with the gearbox requires a larger-diameter motor. That is why those running without a conventional gearbox, or with fewer gears – Renault, technical partner of the e.dams team, has opted for two – have gone for a twin-motor set-up. One motor would be a lighter way to achieve the same torque figures, but would come with a centre of gravity disadvantage.

Renault, which has developed its new motors at the same facility that

produces its Formula 1 powerplants, has opted for a halfway house solution. It is running two motors and a two-speed Sadev gearbox.

“It is a question of risk assessment,” says Vincent Gaillardot, Renault’s Formula E programme manager. “In this first season of open powertrains, do you want really go to for a fully-optimised solution in terms of weight and packaging and miss something that causes some trouble, or do something where you have a bit more margin?”

The one-motor, four-speed approach will be the most common on the grid in 2015/16. As well as Andretti, Mahindra and Venturi, which is supplying its powertrain to Dragon Racing, have gone down this route. Mahindra has worked with McLaren to produce an updated version of the original Formula E motor, while electric-vehicle specialist Venturi, which holds the Land Speed Record for electric-powered cars, has developed its own which it says has more torque and a broader rev range. All are using modifications of last year’s Hewland gearbox.

Official testing at Donington Park this month, which concludes with a third of three two-day tests next week, is likely to prove inconclusive. The British track has little in common with the circuits on which the series races, and one-lap pace set with the 200kW qualifying power maximum probably offers less of an indication of race pace in Formula E than in any other major international racing championship.

“The good thing about Formula E is that we don’t know all the answers,” says Preston. “Only time will tell who is right, and that is going to be fascinating.”



WHO'S RUNNING WHAT

Team	Car	No of motors	No of gears
Abt Audi Sport	Abt Schaeffler FE01	One	Three
Andretti Autosport	Andretti ATEC-01	One	Four
Dragon Racing	Venturi VM200-FE-01	One	Four
DS Virgin Racing	Virgin DSV-01	Two	One
Mahindra Racing	Mahindra M2ELECTRO	One	Four
Team China Racing	NEXTEV TCR 001	Two	One
Renault e.dams	Renault Z.E.15	Two	Two
Team Aguri	Spark SRT_01E	One	Five
Trulli	Motomatica JT-01	Undisclosed	Undisclosed
Venturi	Venturi VM200-FE-01	One	Four



Hitech GP moved into its Silverstone base back in early May

Whatever happened to Hitech?

It was a big name in British F3 in the 2000s, and now founder David Hayle is back with a new project that plans to take on the Euro F3 establishment. **MARCUS SIMMONS** pays a visit

From a Silverstone industrial estate adjacent to the Force India Formula 1 facility, a team set off for Pembrey back in mid-June to shake down and begin testing of its brand-new, carbon-black Formula 3 Dallara-Mercedes cars. The name above the building where they've been prepped since early May is Hitech GP, and this represents a return to the arena for founder David Hayle for the first time in six years.

After eight days of testing – which have taken the team to the rather more exotic venues of Misano, Valencia and the Hungaroring – the team makes its competition debut, with a solo car driven by Alexander Sims, in the F3 European Championship at Portugal's Algarve Circuit on September 4-6. This is strictly a one-off in 2015 before a full campaign in '16, during which Hitech GP will run a two or three-car team.

This is a big deal for F3. Hayle's former team Hitech Racing ran the Renault Driver Development proteges in British F3 in its first two seasons – 2003 and '04 – and won the championship title with Marko Asmer in '07. By this time, Hayle

had already sold the team to the family of driver Walter Grubmuller, but continued in a team principal/engineer role until '09. After this period, Hitech Racing passed into the hands of Ryan Sharp, before dropping off the F3 scene in '12.

So this is a completely new Hitech – hence the 'GP' suffix instead of 'Racing' – but with a few ingredients of the old. "Maybe it was a romantic idea, for me to come back as Hitech with some of the people who were Hitech originally and give it another go, see if we can take on the establishment and try and beat them," says Hayle. "That romantic idea has quickly turned into reality."

Foremost among these Hitech loyalists are truckie John Austin along with mechanics Mark Bennett and Phil High. Chief bolt Bennett is busy at work on one of the chassis as AUTOSPORT pays a visit, the gleaming floor of the racebay complementing the smell of new carpet prevalent elsewhere in the building. It's obvious this place has only just opened...

"We moved in during the first week of May," says Hayle. "We had three Dallaras but they didn't



Hayle and hearty: boss outside the new facility

come out of their packing cases until then. Given our first test was the third week of June, that wasn't a lot of time to build them from nothing...

"When we took over the unit on January 5 it was a bare shell, and I've been a project manager for a few months! It's 10,000 square feet with a mezzanine floor, and you just think it's going to be a few walls and stuff, but I've been up here five times a day. It was like building a house."

Hayle might have kept a low profile lately, but didn't spend that

long out of the sport. The Atech CRS team he co-ran with McLaren GT chief Andrew Kirkaldy in GP3 passed into Bamboo Engineering's hands for 2013, although Hayle stayed on for engineering duties. He then had a few months pursuing other business interests before starting up a two-car Formula Renault 2.0 test team. In early '15, he appeared in New Zealand for the Toyota Racing Series, mentoring one of his FR2.0 testers, Russian Nikita Mazepin.

In the meantime, recruitment

Old days: team ran Piquet Jr in GP2 in '05 as Hitech Piquet Sports



Sims returns to F3 for first time since taking fourth in Macau 2013



“There’s a hell of a lot of work to do, but we’ll have the people and the resources to do it” DAVID HAYLE

was already under way for the new F3 squad. Hayle placed an advert in AUTOSPORT in early February, and even returned for visits from NZ to keep an eye on progress at the new workshop, which includes six car bays, plus damper, dyno, conference and simulator rooms (the sim is being installed as AUTOSPORT takes a tour). There is serious intent here to the extent that Hitech is aiming for an established F3 frontrunner for at least one of its seats. “The only way we’re going to

know where we are is to have a known quantity in the car,” reasons Hayle, who points out that the team has to catch up with rivals that have a three-and-a-half-year head start with the current car. “We can’t go testing and have a guy who thinks the car’s great, only to turn up at our first race and we get our arses kicked. That would be a huge mistake.”

BMW GT factory driver Sims ticks those boxes, and has driven on each day of testing. “He tested and driver-coached for me in GP3,” says Hayle, “so there was a relationship there before. And we wanted someone experienced in the current F3 car to help with our development.”

“He’s done, as you would expect, an extremely professional job. He’s been ultra-helpful and we haven’t had any mishaps. But how quick or slow we are we have no idea, because we haven’t been up against anybody to find out. We won’t know until the test at Algarve before the race.”

“While we want to come back and be taken seriously, we’re under no illusions that it’s not going to be easy. There’s a hell of a lot of work to do, but we’ll have the people and resources to do it.”

THREE HITECH FAVOURITES

Marko Asmer, 2007 British F3 champion

David Hayle: “Marko was as quick if not quicker than anyone, but he was just an out-and-out racer. Every corner was absolutely as fast as he could go. It wasn’t calculated; it was more Gilles Villeneuve style. He had one speed: flat-out. The problem was that Marko never had any



money and was always conscious not to spend a penny more than he had to. When Grubmuller finally set him free [by giving him a free ride in 2007], then you saw the real Marko. But if he had to pick up the bill for a broken wing he would be a different driver.”



Lucas di Grassi, 2004 British F3 race winner

DH: “I’m a big fan of his and we’ve stayed friends ever since. Lucas is the ultimate professional racing driver on and off the track, in terms of fitness, his engineering nous – he’s a qualified engineer. He’s academically very clever and a good racing driver, but a fantastic test driver as many people have found out. If you ask him how a Formula E car works, he’d know as well as any of the engineers. He’s very, very switched on.”



Adrian Valles, 2009 Superleague Formula champion

DH: “If ever there was a driver who’d get you out of the shit it was Adrian. He’d been on the Renault scheme at the same time as Lucas and



Robert Kubica, and I engineered him in Superleague. He was very switched on in the car: you could hold a conversation with him over the radio on strategy and set-up – it never fazed him. Not as academically clever as Lucas, but very smart. If the car was only good enough for fourth or fifth, he’d put it second or third; good for third, he’d put it on pole.”



Mark Donohue's tragic comeback

The American racing legend came out of retirement to spearhead Roger Penske's F1 assault – and ended up losing his life during the Austrian Grand Prix weekend. By **ADAM COOPER**

When Mark Donohue died in Austria 40 years ago this week, motor racing lost not only a hugely successful driver, but also someone who would surely have enjoyed a long and productive career on the other side of the sport. A mechanical engineering graduate from a wealthy New Jersey background, Donohue won everything in sight on the US scene, in every major category (see p28). From 1966 until his death he enjoyed a close friendship and working relationship with Roger Penske, and together they were a formidable team.

The tragic twist was that he had returned from retirement and a frustrating first stab at management to compete as a 38-year-old rookie in the one arena he had yet to conquer: grand prix racing. Sadly the F1 world would never see how good he really was.

“Mark was a very low-profile, down-to-earth guy,” says Emerson Fittipaldi, who first got to know him in the IROC series. “He was very intelligent. I would say he was an incredible talent, a very technical driver, very focused. He was extremely fast and consistent, one of the best drivers I raced against. He started everything with Roger, and it was a very strong relationship. It was similar to Colin Chapman and Jim Clark.”

Donohue was far more than just the driver – he was an integral part of the Penske organisation, helping to lay the foundations of the operation that is still winning today.

Decades before studying telemetry and data became the norm, he dug deeper into the realms of car set-up than anyone before him, always in search of what he called ‘the unfair advantage’ – the name he gave to the book that helped to cement his image as the thinking man’s racing driver. Famously he liked to use a skidpad to explore the mechanical limits of a car – even running single-seaters without wings – as he tried to fine-tune suspension.

“He was very bright and very thoughtful,”

says former Penske engineer Don Cox. “And he really had a good feel for the car. He worked really hard in the car, and he worked really hard outside the car with the team, trying to organise things. He worked tirelessly, day and night. Roger and Mark were a perfect match.”

As the years passed the workaholic spread himself too thinly, taking on too much in too many different categories, and his first marriage collapsed under the strain. Having won the 1973 Can-Am title he announced his retirement from racing at the end of the season. He still found time to win the inaugural IROC series for Porsche 911s, which concluded in February '74, beating a field that included Fittipaldi, AJ Foyt, Richard Petty, Denny Hulme and Bobby Unser.

By then he was deeply involved in his new role as president of Penske Racing, with responsibility for all racing and engineering projects. He'd been doing much of that work anyway, leaving Roger to develop his other businesses, but now it became all-engrossing. Even so, he found it hard to be on the other side of the pitwall, working with drivers with less understanding of the technology.

Early in 1974 Penske took on one of his biggest challenges when he launched an F1 project. There had been one brief earlier foray when he rented a works McLaren and Donohue finished third in a wet Canadian GP in '71.

It was a superb debut performance, but the man himself was underwhelmed, frustrated that he had not been able to sort the car.

“Everyone told me how great it was that I finished third in my first F1 race,” Mark wrote in *The Unfair Advantage*. “But it wasn't so great to me. It was only because of the rain. I was still disappointed in the car, and my lack of ability in getting it developed.”

After years of fine-tuning other people's machinery,

this time Penske wanted to build his own chassis. He acquired the former Leda/McRae F5000 facility in Poole as a European base, and hired ex-Brabham man Geoff Ferris as designer.

Jochen Mass was initially touted as driver but, after trying the new PC1 on the skidpad and then testing it, Donohue agreed to ‘unretire’ and race the car. In his book he acknowledged that he was “putting my life on the line again”. He was excited by the challenge, and knew it would take time. But it was clear that he had wrestled to justify the decision, both to himself and those around him.

“Sure, I'm driving race cars again,” he wrote. “But it's not so much that I changed my mind, as it's that I'm starting over. It's a different series, on different tracks in different countries, with different drivers in different cars, and it takes a different approach. I've even got a different attitude.”

Intriguingly he added: “And to be quite honest, I needed the income.”

After extensive testing, the PC1 made its debut in Canada 1974. On the same weekend the rival Parnelli squad also entered F1, with Mario Andretti – some three years younger than Donohue – at the wheel. It was a low-key start, as the Penske finished 12th at Mosport, and then retired with a suspension issue at Watkins Glen.

That winter Donohue married his girlfriend, Atlanta-born model and socialite Eden White,

whom he'd met while recuperating from a huge 1972 Can-Am accident. It really was the start of a new life. The couple based themselves in a rented flat in Bournemouth so that Donohue could be near the Poole factory. When not lap-charting, White found time to sell antiques in the Portobello Road with the then partner of Stirling Moss. ▶

“DONOHUE DUG DEEPER INTO THE REALMS OF CAR SET-UP THAN ANYONE BEFORE HIM”

AMERICAN RACING'S MR VERSATILE

Mark Donohue showed extraordinary adaptability by winning in all major US categories. Here's a summary of some of his main achievements:



TRANS-AM

Donohue was the man to beat in Trans-Am's golden period from 1967-71. He won 29 races and, while no official drivers' title was awarded, he has been credited retrospectively as unofficial series champion in 1968, '69 and '71, and as runner-up in '67 and '70.



NASCAR

In 1972 Donohue tried his hand at the Winston Cup, making four starts, including his only Daytona 500, in which he was classified 35th. He raced twice more in 1973, winning the season-opening race at Riverside and then making his final appearance at Atlanta, where he was 30th.



CAN-AM

Donohue finished second to John Surtees in the inaugural Can-Am series in 1966, was fourth in '67, and third in '68. He also won the USRRC title in both '67 and '68. He returned to Can-Am in '72, before breaking his leg at Road Atlanta. He dominated in '73 in Penske's Porsche 917/30 (above).



ENDURANCE RACING

Donohue raced at Le Mans for Ford in 1966 and '67, finishing fourth with Bruce McLaren on the latter outing (above), and he also drove a Ferrari 512M in '71 alongside David Hobbs. He won the '69 Daytona 24 Hours with a Penske-run Lola T70 sharing with Chuck Parsons.



USAC/INDYCARS

He competed in the Indy 500 from 1969-73, never qualifying lower than fifth. Donohue was seventh and Rookie of the Year in '69, finished second in '70, and then led the last 13 laps to win in '72 (above). He also won the '71 Pocono 500 and Michigan 200, and took four poles in USAC racing.



F5000

Donohue made occasional appearances in the US series from 1969 onwards, winning two of his three starts in '70. Among his other often-overlooked achievements in American racing is winning the inaugural IROC title in 1973-74 driving a Porsche.

► The 1975 F1 season began with seventh in Argentina, a retirement after the rear wing began to come apart in Brazil, and eighth in South Africa. To his chagrin Donohue never qualified higher than 15th, disappointing for a man so used to setting the pace.

Back in Europe, things didn't get much better. At the Race of Champions he struggled with dire handling gremlins, eventually retiring after two spins. He earned a solid sixth in the International Trophy, but then crashed at Montjuich Park (on oil) and again in Monaco (where the front suspension had begun to flex). He then finished a lowly 11th at Zolder with a poorly balanced car. By now there were even suggestions that Penske, who spent May overseeing his Indy 500 effort, was losing interest.

Donohue couldn't get the PC1 to his liking, and matters were confused by regular swapping between two chassis, and experimenting with long/short-wheelbase and wide/narrow-track versions. For once his secret weapon – the skidpad – hadn't helped.

"Tyres I'm used to will come up to operating temperature and stay there," he told AUTOSPORT's Pete Lyons that summer. "But these tyres just get hotter and hotter on the pad, so you can't get the car to settle down."

He also struggled to adjust to the rhythm of F1 race weekends. The schedule didn't allow him the mileage he required to dial both the car and himself into circuits that he was experiencing for the first time.

In addition Penske was a small, one-car team and, despite its high-profile Citibank sponsorship, the budget was tight. Nick Goozee, then a mechanic/fabricator, and later to become boss of Penske Cars, has an interesting take.

"Although by no means an attention seeker, Mark was used to being the centre of attention," he says. "But the American F1 teams of 1975 were very much regarded as being the second string in the paddock. Mark was used to being able to wander up and down the pitlane and look at the opposition – who probably regarded it as being a bit of an honour – taking in the technical differences between cars.

"The F1 fraternity were not welcoming in that, or perhaps any other, respect. So much was different to driving an F1 car compared to the Can-Am and Indycars of the day. Mark became frustrated with the performance of both the car, and himself."

Goozee adds that PC1 designer Ferris found himself sidelined as Donohue took sole charge of engineering matters. This was a team used to buying a car and honing it, rather than working with the guy who had actually created it. "In America things were different," says Goozee. "There the chief

mechanic was omnipotent and he formed part of a triumvirate between himself, the driver and the team owner, who together took on the responsibility of the performance and the development of whatever car they were racing."

Off track Donohue had a boost when oldest son Michael – about to turn 11 – made a summer visit to the UK, although as ever

“F1’S SCHEDULE DIDN’T ALLOW HIM THE MILEAGE HE REQUIRED TO DIAL INTO NEW CIRCUITS”



The alliance between Penske and Donohue was very successful



Donohue scored points twice in 1975 for Penske

work took priority.

"As soon as I landed we went to a test session at Silverstone," Donohue Jr recalls. "He and my stepmother were living in a flat in Bournemouth. I don't think he cared so much where he lived – it was just close to the race cars.

"I hung around with them for a few weeks, but the only race I went to was Zandvoort. We took a day trip over to Italy to see some steering-wheel manufacturer! I don't think they came back to the States much – frankly money was kinda tight."

Donohue picked up Penske's first points with fifth in Sweden, and he finished eighth in Holland, but he was still qualifying in the 16th-18th range. It was time for a rethink, in part to keep an impatient title sponsor happy. The day after the Zandvoort race Penske personally rang AUTOSPORT to confirm he had bought a new March 751, having initially considered buying a Hesketh. He insisted it was purely to give Donohue and the team a baseline as they worked to develop the PC1, and that there

was no intention of actually racing it.

There was some optimism when the newly supplied chassis lapped Silverstone 2.5s faster than the Penske. It was soon clear that Donohue would indeed race the March, and the PC1 would be mothballed.

Alas the testing form was not backed up at the British GP weekend. Donohue was happier with the 751 – it seemed to respond well to his input – but he again struggled to get up to speed, qualifying 15th. In the race he at least picked up another two points after being classified fifth, despite being one of many to crash in the rain before the red flag.

After Silverstone the battered chassis had to be substantially rebuilt before the Nurburgring, where Mark started 19th.

"In Germany we couldn't keep the front tyres on the car," recalls veteran Penske chief mechanic Karl Kainhofer. "We lost a left-front on the first lap, and then the next lap we lost the right-front, and that was the end of it, as he couldn't make it back to the pits."

In early August Donohue made a rare return to the USA to complete a project he and Penske had been working on for a while: an attack on the world closed-course record with a modified Porsche 917-30K Can-Am car. After learning valuable lessons in an abortive effort at Daytona earlier in the year, and subsequently tinkering with the package, he lapped Talladega at over 221mph. Job done.

Donohue headed to the Osterreichring ►

Wreckage of the March shows the size of the impact



DONOHUE'S SUCCESSOR

After Mark Donohue's death, Penske missed the Italian GP as it regrouped and searched for a new driver. The team was back in action for the finale at Watkins Glen with a replacement March-based chassis, dubbed PC3, although a last-minute problem meant new recruit John Watson actually raced the unloved PC1.

"I'd got to know the Penske team in 1975," he recalls. "I would talk to Heinz Hofer, the team manager. He said, 'We don't know what Mark wants to do in the future.' I think they were indicating that he wouldn't be hanging around too long, and he said if there was an opportunity

they would like to talk to me. Tragically, that opportunity arose after the accident.

"Mark came from an engineering background, and everything was mechanically led. He was an intense man, and he'd go through a little process to prepare himself. He'd sit at the back of the garage analysing data, such as we had, thinking about it deeply. Whereas I and my contemporaries would sit on the pitwall shooting the shit and then jump in the car and bang, straight on it. Roger said, 'I don't know how you do that.' I think it was because we were younger and we weren't preoccupied with the engineering aspects.

"I tried the PC3, without wings, on the skidpad in Pennsylvania. I just drove around in circles and understeered everywhere. I didn't understand the logic of it! That was the difference between Mark's approach and someone from my background. All we wanted to do was go fast, and even in those days it was more important to get the aero balance to get your laptime than to faff around with springs and dampers.

"I believe the PC1 was a much better car than results indicated. It ended up being the basis of the PC4 in 1976 – I think a lot of the suspension was identical."



Penske had courted Watson, hinting at Donohue's retirement



Watson made his Penske debut in the 1975 US GP

Donohue was alert and conscious after the crash



SUTTON

► buoyed by the achievement, as Lyons noted: “He was still in the grip of a kind of quiet euphoria about it in Austria. ‘It’s the only thing I’ve accomplished this year,’ he said with a small grin.”

Back in the F1 car, things didn’t go as smoothly. It rained for much of Saturday and, unable to build up to a faster time, Donohue had to settle for 21st, set in a brief dry window early in the day. Along with Zolder, it was his worst grid position of the season.

Kainhofer says that Donohue was experimenting with low tyre pressures: “Mark being the engineer, he really called the shots on the set-up. He tried very hard to make the car work by adjusting the chassis and tyre pressures. We had a problem with the front end of that car. When you try so hard to make it work, you’re bound to go in the wrong direction. Low tyre pressures create a lot of heat.”

Early in Sunday’s dry morning warm-up Donohue was approaching the fast right beyond the pits when he suffered a failure of his left-front tyre, heavily loaded through the previous corner. The March slammed into the catchfencing, which bunched up underneath the car and helped to launch it over the barrier and into an advertising hoarding.

“I saw he’d crashed and I stopped my car,” recalls Fittipaldi. “I went there and he recognised me. He used to call me ‘Emmy’, not Emmo. He said, ‘Emmy, Emmy’. I said, ‘Mark, are you doing OK?’ He said, ‘I’m fine, I’m fine.’”

Donohue appeared to be uninjured, but he’d received a blow on the head, from either a catchfence post or the scaffolding poles supporting the sign.

The March’s trademark forward-facing rollhoop stays, which were bent, had at least protected him to some degree.

“We took the helmet off, and he was sitting completely in a normal position,” says Fittipaldi. “And then we walked him to the ambulance, myself and Rolf Stommelen, maybe 150 metres. He walked next to me. I held his hand, he was a little dizzy, but we walked. The ambulance was right where I parked my car.”

Donohue was taken initially to the mobile grand prix medical unit that travelled to every race, where several people talked to him, including Kainhofer and Andretti. After complaining of headaches and becoming disorientated he was then transported by a military helicopter to a hospital some 50 miles away in Graz, a facility known for its expertise in neurosurgery.

Meanwhile Kainhofer drove White back to the hotel on Donohue’s scooter. They picked up Donohue’s loaned Porsche 911, and raced to the hospital.

Donohue’s condition deteriorated in the helicopter after a blood clot developed, and he was soon in surgery as doctors attempted to relieve the pressure. His father, his mother-in-law and Penske all flew from the US on Sunday night, arriving on Monday. It was clear that the

“IT’S EASY TO IMAGINE DONOHUE STILL WORKING WITH THE TEAM HE HELPED START”

situation was dire, and on Tuesday evening Donohue lost his fight for life. A marshal, Manfred Schaller, also died as a result of injuries sustained in the accident.

Early in 1976 a legal action was launched by the Donohue estate, claiming that the tyre was defective. In 1984 the Rhode Island Superior Court made an award of \$19.5 million against

Goodyear, and following an appeal the case was finally resolved two years later with an undisclosed out-of-court settlement. The whole affair proved disappointing for everyone who had worked with Donohue, who was well aware of the risks he faced every time he sat in a racing car.

It’s easy to imagine Donohue, a month younger than Penske, still working with the organisation he helped to start. As for his legacy, it lies in the extraordinary success achieved by the team, which celebrates its 50th anniversary in 2016.

“I worked for Roger Penske for a number of years,” says Michael Donohue. “He turned to me one time and said, ‘You know, your dad taught me how to manage.’ He was doing way more than what drivers do today.”



The return of Ligier

Almost two decades after its last grand prix victory, the Ligier name is once again at the top in international racing. **GARY WATKINS** explains how the marque was reborn in sportscars

Which manufacturer had the most cars on the original entry list for this year's Le Mans 24 Hours? You'd probably plump for Porsche or maybe Ferrari off the top of your head. But you'd be wrong on both counts. It was actually a company, correctly described as a constructor, known as Onroak Automotive.

You might be a bit confused until you realise that the French organisation is the custodian of the famous Ligier name.

One of the 10 Onroak-built cars on the original entry for the World Endurance Championship blue-riband disappeared after the Morand team cut its two-car entry in half. Yet the seven Ligiers and two Morgans that started the race in LMP2 made it a tie with Porsche for the honour of being the most

prolific supplier of cars on the grid. That's not bad for a company that didn't even exist four years ago. And try buying a Porsche 919 Hybrid.

The rise of the company headed by gentleman racer Jacques Nicolet is all the more amazing because he didn't enter the world of endurance racing intent on becoming a constructor. Nicolet was a historic racer who'd moved up to the Group CN ranks and wanted to fulfil an ambition to race in the Le Mans 24 Hours. To that end, he purchased the Saulnier Racing squad ahead of the 2007 season, when owner Serge Saulnier was recruited to manage Peugeot's new LMP1 squad. One thing led to another and he is now in charge of a diverse motorsport company with a head count of approximately 250.

Not only does Nicolet's JN Holding organisation build Ligier designs for three different formulae at Le Mans and Magny-Cours

factories, but it also incorporates a composites company in Italy and the DPPI sports photo agency and archive in Paris. Nicolet is also a shareholder in one of the other big constructors of racing cars in France, Mygale.

But then, as Nicolet says, he does have "a passion to build things". The 56-year old is a successful property developer by profession, whose construction projects include, among other things, big supermarkets.

"I like developing things, so it was natural for me, but I only bought Saulnier because it had a car and I wanted to do Le Mans," says Nicolet of his 2007 programme with an AER-powered Courage LMP2 that had started life as the Swiss Spirit P1-spec LC70 the previous season. "I really didn't have any plans to do something like this in the beginning; I just wanted to do the 24 Hours. But I very quickly started to have ideas."

Those ideas resulted in a link-up with



Nine Onroak cars – seven Ligiers and two Morgans – at Le Mans '15



Nicolet raced at Le Mans in 2007 in a Courage LMP2

A PASSION FOR MOTOR RACING

Jacques Nicolet often speaks about his passion for motorsport, but he doesn't really need to. It's evident every time he opens his mouth.

Talk to him about his ownership of the Duckhams Special Le Mans racer designed for British privateer Alain de Cadenet by a young Gordon Murray, and he's quick to tell you that he has each of the different bodywork specifications in which the car raced at the Le Mans 24 Hours in 1972 and '73, and again in '74 as the De Cadenet LM. That's the enthusiasm of a real sports car nut shining through.

Then there's his purchase of the assets of the Pescarolo Sport organisation from the liquidators in 2010. He was one of the parties who bought the team's LMP1 chassis and equipment and then handed them back to

Henri Pescarolo on an open-ended loan so he could restart his eponymous team. More the actions of a passionate philanthropist than a hard-nosed businessman.

Nicolet was a late starter in motorsport. He began racing aged 42 in historic, aboard an Alfa Romeo Giulia, his first race being a 24-hour event at Paul Ricard in 1997. He's amassed a decent-sized collection of historic racers since, including the Ligier-Maserati JS2 and the unique Gulf Mirage M3 Spyder as well as the Duckhams Special.

His passion also explains why he is back racing full-time in the WEC this season with his team and the Ligier JSP2.

"How could I not race such a beautiful car?" he says. "I didn't come back because I wanted to race again, I came back because I wanted to race *that* car."



Nicolet (left) enjoys the support of Guy Ligier (right)

"FOR ME LIGIER WAS ONE OF THE BEST NAMES WE COULD FIND IN RACING" JACQUES NICOLET

raced on with the car through 2009. At the end of the season, Nicolet also acquired the rights to the LMP1 from the Sora composites group that had taken over the Pescarolo team.

"That's when we really started to think about working as a constructor, at the beginning of 2010," says Nicolet. "Setting up a composites company was the next step. It's simple: to be able to build racing cars you need carbonfibre, so why not have your own company?"

HP Composites was established in 2011 in what has become known as 'carbon valley' in the Piceno region of central Italy. Today it has more than 100 full-time staff and has worked on projects as diverse as the Dallara-designed Formula E one-make electric racer – it produced the lightweight bodywork – and the Alfa Romeo 4C sports car. It even built the monocoques for the Dome and HPD P2 designs that raced against the Ligier JSP2 this season.

It also agreed a deal in 2013 to build the monocoques for the latest in a line of Group CN baby prototypes produced by Ligier. The French constructor in Magny-Cours formerly known as Martini had been taken over by ex-Formula 1 team owner Guy Ligier in 2004, eight years after the sale of his grand prix squad. That was the start of a relationship that has resulted in the line of Ligier sportscars from the latest CN, now called the JS53 EVO 2, through the new Nissan-powered JSP3 LMP3 to the JSP2.

Nicolet had become a true constructor when he started selling his LMP2 chassis in 2012 under the Morgan name under a branding agreement that followed his purchase of a dealership specialising in British sportscars in the south of France. That deal only covered the open-top P2, which had undergone a not entirely uncontroversial update of the car for the second year of the cost-capped P2 formula courtesy of its name change. So he needed a new name.

"I wanted to be a constructor, but I didn't really have a name," explains Nicolet, who had established Onroak as a separate entity from OAK Racing in 2012. "For me Ligier was one of the best names we could find in motor racing. Maybe it is not so well known by the general public, but for the passionate fans it is perfect. So we decide to work together. I could have called the car an Onroak, but I preferred to continue the Ligier story."

Nicolet has an agreement to use the Ligier name and a lease on its factory in Magny-Cours where the CN and LMP3 chassis are produced. It is an arrangement that agrees with the 85-year-old founder of the marque. ►

Le Mans legend and successful team owner Henri Pescarolo for the 2008 season. The plan was to create a new organisation known as Pescarolo Automobiles that would incorporate the Pescarolo Sport and Saulnier Racing squads, as well as Nicolet's Heritage Racing team.

Saulnier Racing ran Pescarolo 01 chassis in both LMP1 and P2 in 2008, but the relationship didn't work out and the planned company was never incorporated. Nicolet explains that there was a fundamental difference of opinion between him and Pescarolo.

"Henri was only interested in winning Le Mans," he says. "I realised that first you have to build a company and maybe after that you can win the 24 Hours."

The split in the partnership resulted in Nicolet retaining the rights to the Pescarolo LMP2, and the foundations of Onroak were laid. The team changed its name to OAK Racing and

THREE LIGIERS YOU PROBABLY REMEMBER...

Ligier-Matra JS5

This was the car that brought Ligier into Formula 1 with Jacques Laffite in 1976. The Matra-powered JS5, made famous by the 'teapot' airbox it ran at the first three GPs, notched up a trio of podiums and the marque's first pole.



Ligier-Cosworth JS11

The JS11 was arguably the best F1 Ligier of them all. The switch to Cosworth DFV power yielded wins for Laffite in the opening two races of 1979, but he faded to fourth in the final points. Didier Pironi (pictured) won the Belgian GP at Zolder in 1980 in JS11/15.



Ligier-Mugen Honda JS43

Ligier scored a ninth and final grand prix victory in its last season before it became Prost Grand Prix. An against-the-odds win for Olivier Panis at Monaco in 1996 ended a 14-year victory drought, but the team did not hit the podium again that season.



...AND THREE YOU POSSIBLY DON'T

Ligier-Cosworth JS2

Sometime F1 driver Guy Ligier started building sportscars in 1970. The JS2 initially had a Maserati V6 powerplant, but a switch to the Cosworth DFV helped it to second place at Le Mans in 1975.



Ligier-Spiess/Opel JS47

The final Formula 3 car to roll out of the factory that produced a line of successful Martini chassis was driven by future F1 racer Nico Hulkenberg. He switched from a Dallara on the way to fifth in the 2006 German F3 Cup.



Ligier-Honda JS53

This was the first fruit of the relationship between Jacques Nicolet and Guy Ligier. HP Composites builds the monocoques for Ligier's latest Group CN machine, which is still going strong as the JS53 EVO 2.



► "It is good to see the name back in endurance racing and winning," says Ligier, who still goes to the factory on a daily basis.

Arguably the biggest moment in the success story that is Nicolet's motorsport adventure came late in 2013. Saulnier and then OAK had raced as a P1 privateer with the Pescarolo-based chassis in 2008, and then 2011 through '13, and had an all-new P1 coupe on the stocks for '14. A late decision was made to change tack and use the basis of the design for a new P2 coupe.

"I realised that there was no market for P1 cars and it made no sense to be there as a constructor racing against the manufacturers," explains Nicolet. "I considered it better for the company to build the P2, where there was more market potential."

Significantly Onroak was able to bring what became known as the Ligier JSP2 to market before many of its key rivals. "Up to that point, we were always behind everyone else," says Nicolet. "This was our opportunity to be first."

Onroak made what appeared to be an unusual decision for a constructor when it decided against releasing the new JSP2 at the start of the 2014 season, in favour of intensive testing. The car was instead given a debut at Le Mans in June after a development programme that ran to nearly 10,000km.

"It was a difficult decision, because our first customers wanted to race the car," says Philippe Dumas, who runs both OAK Racing and Onroak



OAK's racing activities have helped drive chassis development, says Nicolet

RACING CONNECTIONS



There is an obscure historical link between the two primary marques competing on the track and for customers in LMP2 at the moment. The Magny-Cours workshops of which Jacques Nicolet became the owner when he purchased Saulnier Racing (formerly Promatecme), and which remained the base of OAK Racing until its move to Le Mans, was once the home of ORECA. Hugues de Chaunac's squad won multiple French F3 titles from there before upping sticks for Paul Ricard in 1987. The reason? Because the Ligier Formula 1 team was relocating to Magny-Cours with local government backing.

on a day-to-day basis. "Some people thought it was a bit of a gamble to give the car its debut at Le Mans, but we were confident because we had done the mileage.

"Maybe we would have sold more initially if we were prepared to deliver it at the start of the season. I think it was a good decision, because we now have nine chassis racing."

Two of those cars are contesting the WEC with the Extreme Speed Motorsports squad. Onroak's ability to build two new Ligiers in just six weeks after ESM's decision to abandon the troubled HPD ARX-04b that it raced in the Daytona 24 Hours United SportsCar Championship opener was only possible because it is part of a much larger group.

"To deliver two new cars and all the spare parts in such a short time is really impressive, I think," says Dumas. "The only reason we were able to do that is because we have HP Composites behind us."

Producing a car for the new LMP3 formula was a no-brainer for Onroak. "The rules that the Automobile Club de l'Ouest has come up with are very good," says Nicolet. "It also gives us the chance to use all the knowledge we have learnt from the P2."

The Ligier wasn't the first P3 to hit the market, but the first run of five chassis sold out and a similar number of extra sales have been made. The car is scheduled to start racing in October, with EuroInternational at the start of the Asian

Le Mans Series at Fuji and in the European Le Mans Series at the Estoril finale with the Graff Racing and Extreme Limite teams.

The future looks bright for Onroak. It was chosen as one of the four constructors licensed to build cars for the forthcoming new P2 category. That will result in another new Ligier for 2017. And there are no plans for OAK, which claimed the WEC P2 crown in 2013 and is currently running three cars in the WEC, to stop racing Ligiers. Nicolet believes it is essential if his group is to deliver a winning product to its customers.

"It is very important to have a race team for the development of the car," he says. "We are always learning and improving the set-up. I believe the reason the JSP2 is such a good car is that we are focused on racing and winning. But we have a rule that we must be transparent with our customers."

Nicolet's ambitions in P1 remain, but he would only return with a manufacturer. And that makes it unlikely that there will be a car bearing the Ligier name racing for overall honours at Le Mans any time soon.

"I hope everything we are doing will interest a manufacturer to enter P1," says Nicolet. "We have a race team, we build our own cars, we have our own design office and the composite business in Italy. We have no structure to build. "We have everything a manufacturer would need, so we are waiting." ❧



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V8 STOCK CARS GOIANIA (BR), AUGUST 16 RD 7/12

Camilo bats off injury to win a million

THIAGO CAMILO HAS MADE A HABIT of winning the V8 Stock Car series' annual One Million Race (for which the victor claims a million reais, roughly equal to £185,000), but even he wouldn't have fancied his chances with injured feet from 12th on the grid in his RCM Chevrolet.

Camilo, who was hurt in a horrific accident in the previous round at Curitiba, was only given clearance to race on the day before practice, and began working on a perfect race

set-up in his bid to repeat his One Million wins of 2011 and '12.

Series leader Marcos Gomes claimed pole from Daniel Serra, but a slow reaction at the start from Gomes dropped him to sixth and delayed all those behind him, including third-fastest qualifier Rubens Barrichello.

Serra led from fast-starter Ricardo Mauricio, Ricardo Zonta and Camilo, who opted for a conservative pace to save fuel before he used his engine

boost for the first of the 10 permitted bursts to pass Zonta.

Five laps later Camilo followed Serra into the pits, taking less fuel so he emerged ahead after the stops. Mauricio stopped one lap later and a perfect job from the RC team allowed him to keep the lead, only for his engine to lose oil pressure on the 21st lap of 32.

Camilo nursed his car – and his feet – home to win from Serra by just over two seconds, with Zonta

completing the podium and Gomes maintaining his points lead in fourth, ahead of Felipe Fraga.

● Lito Cavalcanti

RESULTS

1 Thiago Camilo (Chevrolet Cobalt), 32 laps in 46m27.609s; 2 Daniel Serra (Chevy), +2.245s; 3 Ricardo Zonta (Chevy); 4 Marcos Gomes (Peugeot 407); 5 Felipe Fraga (Peugeot); 6 Max Wilson (Chevy). **Points 1 Gomes, 158**; 2 Serra, 133; 3 Caca Bueno, 125; 4 Julio Campos, 121; 5 Wilson, 110; 6 Rubens Barrichello, 110.

BRAZILIAN TOURING CARS GOIANIA (BR), AUGUST 16 RD 5/8

Salas heads Figueiredo

TWENTY-YEAR-OLD GUILHERME Salas equalled a series four-year-old record in taking his third win in a row, before 18-year-old Rodrigo Baptista became the youngest victor in BrTCC history.

Salas led all the way in the first race, escorted throughout by the sister Onze Motorsports Chevy Cruze of team owner and former John Cleland Vauxhall BTCC understudy Nono Figueiredo. Rubens Barrichello survived a close fight to take his first podium of the season in his Renault.

Fourth place for Baptista gave his Bassani Racing Toyota fifth in

the starting line-up for the reversed-grid race, and he took just six laps to claim the lead. From here on, Baptista opened an advantage over Vicente Orige.

Salas was excluded after a doorbanging battle that sidelined Cesar Bonilha, while Barrichello was also a battle-scarred DNF. Two sixth places enabled Vitor Meira to keep ahead in the points.

● Lito Cavalcanti

RESULTS

Race 1 1 Guilherme Salas (Chevrolet Cruze), 18 laps in 28m01.306s; 2 Nono Figueiredo (Chevy), +1.338s; 3 Rubens Barrichello (Renault Fluence); 4 Rodrigo Baptista (Toyota Corolla); 5 Gabriel Casagrande (Renault); 6 Vitor Meira (Honda Civic). **Race 2 1 Baptista**, 17 laps in 26m48.324s; 2 Vicente Orige (Honda), +7.390s; 3 Daniel Kaefer (Toyota); 4 Gustavo Martins (Honda); 5 Thiago Marques (Toyota); 6 Meira. **Points 1 Meira, 149**; 2 Orige, 135; 3 Martins, 122; 4 Marques, 103; 5 Figueiredo, 96; 6 Cesar Bonilha, 94.



SCANDINAVIAN TOURING CARS KARLSKOGA (S), AUG 15 RD 5/7

Volvos can't be beaten by ballast gain

NOT EVEN THE INTRODUCTION OF 'performance weight' could slow the mighty Volvos as Polestar-run works drivers Thed Bjork and Fredrik Eklblom shared the wins.

Bjork and Eklblom, both carrying 30kg extra this weekend, dominated both qualifying runs, and Bjork led all the way to head a one-two in the first race. Dacia driver Mattias Andersson was a strong third ahead of Fredrik Larsson's BMW (which had 20kg extra), while the Saab of Richard Goransson lost speed and dropped to sixth behind Erik Johansson's Kia.

With the top 10 qualifiers reversed on the grid for race two, Bjork spun on the first lap and then had to mount a recovery drive from last to fourth. Eklblom, from ninth on the grid, avoided a first-lap crash but was second within four laps.



Fast starter Andersson was leading the race comfortably, but Eklblom reeled him in and passed him six laps from the end for victory.

Goransson had better speed this time and kept Bjork – who continues to lead the points – behind him for third, while Larsson was a casualty of the first-lap accident.

● Tege Tornvall

RESULTS

Race 1 1 Thed Bjork (Volvo S60), 18 laps in 19m29.489s; 2 Fredrik Eklblom (Volvo), +4.276s; 3 Mattias Andersson (Dacia STCC Edition); 4 Fredrik Larsson (BMW SR); 5 Erik Johansson (Kia Optima); 6 Richard Goransson (Saab 9-3). **Race 2 1 Eklblom**, 18 laps in 19m49.500s; 2 Andersson, +4.396s; 3 Goransson; 4 Bjork; 5 Rasmus Marthen (Kia); 6 Johansson. **Points 1 Bjork, 270**; 2 Eklblom, 260; 3 Larsson, 212; 4 Goransson, 166; 5 Andersson, 159; 6 Johansson, 94.

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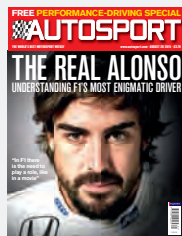
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ADAC GT MASTERS NURBURGRING (D), AUGUST 15-16 RD 5/8

Audis reverse win drought in the Eifel rain

A WINLESS FIRST HALF OF THE GT Masters season for Audi was laid to rest with the two MS Racing R8s sharing the victories, as rival machinery from Mercedes and BMW were given a 10kg increase.

Martin Ragginger led the first race in the double pole-winning Schutz Motorsport Porsche, but as rain fell he waited too long to make a tyre change. Klaus Bachler resumed out of contention after the car's pitstop, and was then eliminated with a damaged cooler after a clash with the Bentley of Fabian Hamprecht.

Nicki Thiim was now leading in the Abt Audi started by Jordan Lee

Pepper, who was one of the first to come in for wets. But a 30-second penalty for overtaking too early before the end of a safety-car period lifted the MS machine of Austro-Swedish pairing Daniel Dobitsch and Edward Sandstrom into the winning position. Another Audi, driven by Philip Geipel and Rahel Frey, stayed out on slicks throughout to take second place.

Bachler led the second race, but was passed by Thiim after an early safety car. Six laps later Thiim's Audi stopped on the track, causing another safety-car period.

An error on when to change

drivers during the safety car delayed the Porsche, moving the MS Audi started by Marc Basseng into the lead in the hands of Florian Stoll.

Stoll maintained the advantage to lead home the race-one-winning sister car, as Ragginger recovered to claim third position.

It was a disaster for series leaders Sebastian Asch and Luca Ludwig, whose Zakspeed Mercedes was found to be 3.5kg underweight after qualifying and sent to the back of the grid. Safety-car infringements in both races left them with results of ninth and 10th.

● Rene de Boer

RESULTS

Race 1 1 Daniel Dobitsch/Edward Sandstrom (Audi R8 LMS ultra), 35 laps in 1h00m52.096s; 2 Philip Geipel/Rahel Frey (Audi), +0.407s; 3 Stefan Wackerbauer/Kelvin van der Linde (Audi); 4 Hari Proczyk/Bernd Schneider (Mercedes SLS AMG GT3); 5 Jordan Lee Pepper/Nicki Thiim (Audi); 6 Claudia Hürtgen/Uwe Alzen (BMW Z4 GT3). **Race 2** 1 Florian Stoll/Marc Basseng (Audi), 32 laps in 59m57.802s; 2 Dobitsch/Sandstrom, +8.158s; 3 Martin Ragginger/Klaus Bachler (Porsche 911 GT3-R); 4 Jens Klingmann/Dominik Baumann (BMW); 5 Proczyk/Schneider; 6 Andreas Weishaupt/Christer Jons (Audi).

Points 1 Sebastian Asch/Luca Ludwig, 151; 2 Bachler, 121; 3 Baumann/Klingmann, 101; 4 Proczyk, 77; 5 Hürtgen, 73; 6 Luca Stolz, 72.



Austrian Stoll claims second MS Audi win

NASCAR SPRINT CUP MICHIGAN (USA), AUGUST 16 RD 23/36

Kenseth extends Gibbs team domination

MATT KENSETH CLAIMED HIS third win of the Sprint Cup season with a dominant performance at Michigan.

From pole, the Joe Gibbs Racing Toyota driver led 146 of the race's 200 laps and after getting the jump at the final restart went on to win by nearly two seconds.

As the Chase title playoff looms, it extends the Gibbs team's imposing run of form to six wins in the past eight races.

Kevin Harvick was second in his Stewart Haas Chevrolet, despite having to limp back to pitlane after running out of fuel at the end of a stint halfway through the race, while another Chevy pair – Martin Truex Jr and Austin Dillon – were two of the big movers in third and fourth.

Truex got there from 22nd on the grid, while Dillon, having qualified fourth, started at the rear due to a pre-race engine change and lost more time with a slow pitstop.

Recent form man Kyle Busch joined Dillon at the back of the grid, owing to a change of chassis

following a practice spin, and progressed to finish 11th. With the result, he moves up to 29th in the standings and tightens his grip on the top-30 position he requires to qualify for a Chase spot.

Carl Edwards was sixth, ahead of Joey Logano and Ryan Newman, while multiple champion Jimmie Johnson was 39th on a day that included a puncture, an error entering pitlane and the spin that caused the final caution period with 17 laps to go.

On the bubble for Chase inclusion, Clint Bowyer was 41st, 36 laps down, after a mid-race crash.

RESULTS

1 Matt Kenseth (Toyota Camry), 200 laps in 2h47m18s; 2 Kevin Harvick (Chevrolet SS), +1.722s; 3 Martin Truex Jr (Chevy); 4 Austin Dillon (Chevy); 5 Denny Hamlin (Toyota); 6 Carl Edwards (Toyota); 7 Joey Logano (Ford Fusion); 8 Ryan Newman (Chevy); 9 Brad Keselowski (Ford); 10 Dale Earnhardt Jr (Chevy). **Chase grid** 1 Jimmie Johnson, 4 wins/752 points; 2 Kyle Busch, 4/395; 3 Kenseth, 3/751; 4 Harvick, 2/866; 5 Logano, 2/818; 6 Earnhardt, 2/784; 7 Kurt Busch, 2/683; 8 Truex, 1/755; 9 Keselowski, 1/754; 10 Hamlin, 1/670; 11 Edwards, 1/628; 12 Jamie McMurray, 0/663; 13 Paul Menard, 0/654; 14 Newman, 0/649; 15 Jeff Gordon, 0/648; 16 Clint Bowyer, 0/616.



Win number three of 2015 for Kenseth

X-COUNTRY WORLD CUP

Qatar's Nasser Saleh Al-Attiyah and French navigator Matthieu Baumel led the three-day Hungarian Baja from start to finish, edging into a nine-point lead over Russian Vladimir Vasilyev. The Mini All4 Racing crew won all but one of the stages to cruise to victory by 14m48s. Dutchman Bernhard ten Brinke, in a Toyota Hilux, fought back from brake issues to claim second from Czech Miroslav Zapletal, courtesy of fastest time on the final stage.

GLOBAL RALLYCROSS

Nelson Piquet Jr held off Patrik Sandell throughout a pressured final to take his maiden series win in Washington DC in his SH Racing Ford Fiesta. Sandell's Bryan Herta Autosport Fiesta headed two more Fords, driven by Ken Block and Steve Arpin.

SCANDINAVIAN CARRERA CUP

Johan Kristoffersson wrapped up the title at Karlskoga, after returning to the series in 2015, with his ninth and 10th wins of the season. That was despite a last-lap assault from Jocke Mangs in race one.

NASCAR XFINITY

Regan Smith barged Alex Tagliani out of the way at the penultimate corner of the final lap to take a contentious win in his Chevrolet on the Mid-Ohio road course. Ex-Indycar ace Tagliani was second from Ty Dillon and series leader Chris Buescher.



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“If people want to call me the villain, I’m not going to tell them to stop”

Controversial Chip Ganassi Racing rookie Sage Karam hasn't made many friends in IndyCar. But as MARK GLENDENNING explains, he has the potential to be the category's next fast 'bad guy'

How long is it since motor racing has had a real villain?

The really good ones are a rare breed, because to create a villain requires a very specific recipe. The first ingredient, obviously, is some sort of capacity, a willingness for villainy. That in itself can take on all kinds of forms. There needs to be some sort of disregard for authority, or at least for seniority. Insouciance is a must, as is a predisposition towards controversy. But crucially, the foundation of the whole thing is that the driver in question has to be good. The faster, the better. No-one takes a villain seriously when they're running around in 20th. A real villain is quick, and gives you something additional to invest in when you're watching a race, whether you're in their corner or not.

So they don't come along often. In IndyCar/CART, the go-to guy for that sort of thing in recent years was Paul Tracy. In Formula 1... Eddie Irvine, maybe? NASCAR is a bit tougher: some drivers manifest certain villainous elements, like Brad Keselowski, but that's more from fans whose team and driver loyalties are directed elsewhere. That's not the same thing. And there are guys like Kurt Busch, but when the aberrant behaviour is off-track, that's when

you start exploring the territory that divides the pantomime villain – which is essentially what we're talking about – from something else.

So as sick as Sage Karam might be of talking about the controversies that have arisen during his IndyCar rookie season with Chip Ganassi Racing, they are an inextricable part of the story. And they're also an inextricable part of his appeal. Ed Carpenter complained that Karam has “no respect”, while Graham Rahal says that he “ripped [Karam's] ass” over what he considered to be “careless driving”.

At Mid-Ohio, the 20-year old found himself at the centre of a similar controversy to the one that cost Nelson Piquet Jr his Formula 1 career, although he was ultimately cleared of any wrongdoing. Throw in the fact that he's fast, and you have the kind of driver who seems to be the very embodiment of IndyCar's current ‘IndyRivals’ marketing campaign.

It's heady stuff for a driver still seeking to establish long-term roots in the sport. Shortly after Karam won the Indy Lights title in 2013, Chip Ganassi signed him to a driver-development deal. His initial duties during '14 involved a lot of the standard development-driver fare – listening in on debriefs, standing around the pits wearing a headset – but it also allowed for some actual driving. Karam made a few United SportsCar Championship starts with Ganassi's Riley-Ford, including appearances at the Daytona 24 Hours and

Sebring 12 Hours. And more importantly, it provided for his Indianapolis 500 debut in a car prepared by Dreyer & Reinbold; an opportunity he exploited by finishing ninth after starting from the back row of the grid.

That would have been a worthy achievement for any driver, never mind one whose preparations for the race had forced him to miss his high-school prom (“I had always missed prom, every year, for a race,” he said in an interview later. “Doing the Indy 500 while I was still in high school was much cooler.”).

His run at Indy was as robust a claim for a full-time drive as you could ask for and Ganassi largely obliged this year. Budget constraints meant that Karam has had to share the seat with Sebastian Saavedra, but he has missed only Long Beach, the Indy road course, and Toronto. And he has benefited from the experience: his development curve over the course of the year spikes steeply toward the top of the graph. He's becoming an increasingly regular presence in the top 10 during races, and earned his first podium at Iowa Speedway.

“It's just one of those things of me getting a little more confident in the car; a little more comfortable,” he says. “Also the team starting to click a bit more, and me starting to figure out my engineer, and how to work with my teammates in a better way.”

Karam's job is made all the trickier on that front by the fact that he's part of a four-car ▶



ABBOTT/LAT

“When someone’s badmouthing me to the media, it doesn’t get to me” SAGE KARAM

► line-up: for all the advantages that come with having access to multiple sources of data, there’s also a much greater risk of getting lost in the numbers. More experienced drivers become adept at filtering the bits of information from their team-mates that are most useful to them but, in the absence of the knowledge base to make those sorts of calls, Karam has found an effective workaround.

“With three team-mates there is a lot of data to choose from,” he says. “But this whole year, I’ve really been set on just looking at Scott [Dixon]’s data, because our driving styles are super-similar. Every weekend, I pretty much roll off the trailer with the same set-up as

Dixon. So I’m really just mostly looking at him, and then I look at the other guys as well, just dissecting some turns and stuff. A lot of times I’ll see brake traces or throttle traces that are better than mine. But as far as looking to invest in the data, I usually just go to Dixon’s.”

Dixon has also been central to helping Karam address some of his rookie weaknesses, particularly understanding how to manage his fuel mileage.

“I’ve really been working on saving fuel and Dixon’s the king of that, so I’ve been trying to pick his brain about it,” Karam says. “I think at Mid-Ohio I really got a good handle on it.”

The other area he feels that he has shown the

most improvement over the season is his patience, which was previously lacking.

“These races are so much longer than Indy Lights races, and early in the season I was pushing so much harder early in the race when I didn’t need to,” he says. “Now I’ve learned to take it down a notch and keep something for the last 20 laps of the race. When you’re driving these big cars, I guess it makes you mature in a lot of ways, but there have definitely been a few things that we’ve really had to focus on.”

The claims of improved patience and maturity are justified, although they may cause a few rolled eyes among his rivals. He was put on probation for five races for crashing into Jack Hawksworth in Detroit, and it was during the final race of that probationary period – Iowa – where his physicality and aggression drew the ire of Carpenter and Rahal. Video of Karam’s post-race altercation with Carpenter in the Iowa pitlane shows the Ganassi driver looking more amused than chastened.

“Obviously... in the last few races I’ve made some enemies, but that’s also when I’ve been starting to bring the results in,” he says. “And when the rookie starts getting the results... you have people who don’t like to lose to rookies. When someone gets in my face, or gets on the mike and starts badmouthing me to the media, it doesn’t get to me. I like to just go out there and drive my hardest, and race other people hard. I never intentionally go out of my way to ruin



Karam is building
a reputation as a
fearless competitor

COBB/LAT



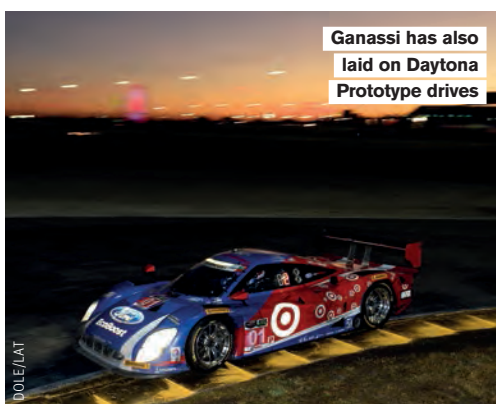
Two seasons in Star Mazda yielded fifth and third places



Winning the Indy Lights title in 2013 opened doors



Karam finished ninth from the back of the grid in his first Indy 500



Ganassi has also laid on Daytona Prototype drives

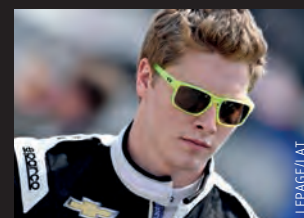


First IndyCar podium came with third place in Iowa

INDYCAR'S OTHER RISING STARS

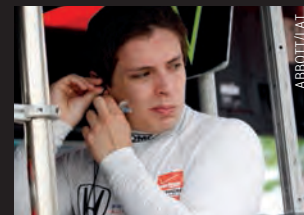
JOSEF NEWGARDEN

This has been a breakout season for the Tennessean, whose superb performances with the smallish CFH Racing team have put him at the centre of the silly season, drawing interest from the likes of Ganassi and Penske. Gregarious and marketable outside the car, the 24-year-old stands on the brink of big things; it will be interesting to see what he can do with a bigger team.



GABBY CHAVES

The reigning Lights champion was described by boss Bryan Herta as the best full-time driver he's ever had. That might not resonate with ex-BHA types like Alex Tagliani, but it speaks to the quietly impressive performances that the Colombian has turned out in his rookie year. He recently earned some additional old-school cred by giving midget racing a try.



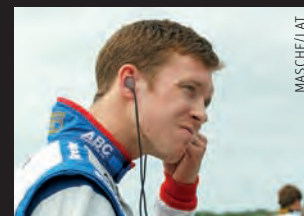
CARLOS MUNOZ

The Colombian burst onto the scene by qualifying and finishing second for the 2013 Indy 500. That's an impressive feat for any IndyCar debutant, never mind one who was still racing full-time in Indy Lights. He backed it up with three podiums in 2014; this season has been more lean, although his Andretti team was slow to dial in the Honda aero kits.



JACK HAWKSWORTH

As a rookie, the Briton put in some eye-catching performances as Bryan Herta Autosport's single entry last year, but his switch to the two-car AJ Foyt Racing team hasn't yet translated into the step forward he'd have hoped for. There's still potential waiting to be tapped though, and his top-10 run last time out at Mid-Ohio could give him the springboard to a solid finish to the season.



somebody's lap, or race, or anything. I just race hard, and that's what the sport needs – guys who are going to leave everything out there."

Fast-forward to Mid-Ohio. In qualifying, Karam drew more barbs from Rahal, this time for what Rahal claimed was a block during his fastest qualifying lap. Then, in the race, came the baffling spin, which brought out a caution that was timed perfectly for Dixon, who is the only Ganassi driver still in the title hunt.

The New Zealander had started from pole and dominated the opening stint but was himself short-changed when the first caution fell after his rivals had pitted, but before he'd made his own stop, therefore dumping him back into the pack. Karam's later spin in effect reversed that – Dixon and eventual winner Rahal were elevated to the front while Juan Pablo Montoya, leading both the race and the championship, fell out of contention. A subsequent investigation by IndyCar failed to find sufficient evidence that Karam spun deliberately, and Karam himself has scoffed at suggestions that it was intentional.

He is aware that these sorts of incidents all contribute to his increasingly complicated reputation as a young, hard, fearless competitor who can sometimes fly close to the wire. But if he doesn't exactly embrace the 'villain' label in the way that Tracy did (he once wore a Mexican wrestling mask to antagonise the fans of arch-rival Sebastien Bourdais), then he's not afraid of it either.

"I don't think I'd call myself a villain of the sport," he says. "But if people want to call me the villain, I'm not going to tell them to stop. It's just one of those things. I'm one of the only drivers in the paddock who is going to express how I feel. If I feel mad at somebody I'll express it, and if I'm really happy I'll show it. I'm not one of those guys who's robotic. I like to show my personality, and I think that's a good thing. The fans need to feel more engaged, and feel like they have more of a connection with the drivers."

So if someone has a problem, that's up to them. With just two races left to finish staking a claim on a seat for 2016, Karam's focus is elsewhere: trying to win at Pocono ("It's my hometown race, and for me it's like a second Indy 500") and helping Dixon to win the title.

"If me and Dixon are running side by side with five laps to go, obviously I've got to think of his championship," he says. "He's probably the only guy right now that I won't race hard. Other than that, if we have the opportunity to win a race, I'm going to go for the win."

For the rest of us, the real fun lies in the seasons ahead, as Karam's story continues to unfold. He's probably going to annoy a few more people, but he's also likely going to win a lot of races. In a series where drivers can remain competitive into their early forties, he has the potential to grace these pages for the next two decades. It's going to be quite a ride. ❧

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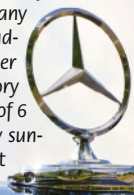


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Responsible for the overall Customer project, the Project Manager develops, implements and manages the project managing process, work plans and activity schedule to meet Hyundai Motorsport's company objectives. He/She supervises and collaborates with staffs to maximize the efficiency within the projects to achieve the HMSG goals. This means, more in details, planning and following-up the full scale project, managing the budget, scheduling and reviewing related department's objectives. The Project Manager also coordinates the related personnel and resources, and constantly monitors and reports on progress of the project(s).

The successful candidate will justify a strong Engineering and Project management background in Motorsport. We also expect an Engineering degree or similar, excellent team and communication skills and fluent English.

SALES REPRESENTATIVE

The Sales Representative manages sales of our customer project and related products and services within a defined geographic area (starting from Europe and expand to all over the world): he/she performs sales activities on major accounts and negotiates sales price & discounts in consultation with the company's top management, ensures the development and coordination of sales personnel, manages the documentation and documentation process for each product and defines all sales policies, practices and procedures. The Sales Representative identifies objectives, strategies and action plan to improve short- and long-term sales and earnings, ensuring consistent, profitable growth in sales revenues.

The successful candidate will justify a strong Sales related background in Motorsport. We also expect either Engineering or Management degree or equivalent, excellent team and communication skills and fluent English.

SALES SPECIALIST

The Sales Specialist supports the Sales Representative to plan, organize and manage all sales activities for our Customer project. He/She participates in the implementation of sales objectives and goals, ensures a close follow up of tooling asset to be matched with Customer orders, monitors the evolution of the price lists for the assigned products, prepares weekly / monthly Sales reports to be shared with the Management Team and the Korean Headquarter.

The successful candidate will justify a Sales related background in Motorsport. We also expect a Business degree or equivalent, excellent team and communication skills and fluent English.

ENGINE PROJECT LEADER

Reporting to the Engine Manager, the Engine Project Leader will have to coordinate the work between the Engine Supplier, our Headquarters in Alzenau and the Group Headquarters in Korea. He/She will follow the planning in relation with the other department involved in the project, the Engine Supplier and the Global Project Leader. Working in relation with the Chassis Project Leader for the integration of the engine and related engine accessories, he/she will as well follow up and control the BOM. Testing activities with Engine Supplier and/or events (tests, rallies) might be to attend.

The successful candidate will justify a strong Engine related background in Motorsport. We also expect a Mechanical Engineering degree or equivalent, excellent team and communication skills and fluent English.

ENGINE BUILDER

Reporting to the Engine Workshop Leader, the Engine Builder is the one to build or strip complete development and event WRC engines within Hyundai Motorsport, this including respecting the engine assembly and disassembly procedures, reporting to Engine Workshop Manager in case of problems in these processes, fulfilling assembly and disassembly documentation and report, building / stripping engine sub-assemblies, monitor engine mileage, assisting built engine through the continuity of its life (dyno, car tests, event support). Potential attendance to tests and events might be required on an irregular basis.

The successful candidate will need to justify a previous experience in engine building within a Motorsport environment like WRC / Endurance / GT / Touring Car / F1. We also expect excellent team and communication skills and fluent English. Potential attendance to tests and events may be required on an irregular basis.

MIDWARE ENGINEER

Reporting to the Technical Director, the Midware Engineer is taking care of both Hardware and Software design. Hardware for measures and power management, and Software for small automotive micro-controllers including CAN-Bus communication and data-acquisition.

The successful candidate will justify a good knowledge of Matlab-Simulink and C++ experience, preferably knowing as well CADENCE or similar software. He/She should have a previous experience of 2 years minimum in an Electronic department within an automotive environment. We also expect excellent team and communication skills, the ability to use the MS Office tools and fluent English. Potential attendance to tests and events may be required on an irregular basis.

ELECTRICIAN

Reporting to the Electrician Workshop Leader, the Electrician is in charge of the preparation of on car sensors and harnesses, inspecting and servicing of on car sensors, components and harnesses. He/She tracks the side installation and repair of on car harnesses and sensor, recording of component inspections, component lifting and sensor calibrations, calibrating the car sensors. Regular liaison and effective communication with the other department members will be essential in order to schedule work and exchange technical information.

The successful candidate will need to justify a previous experience in an Electronic department within a Motorsport environment like WRC / Endurance / GT / Touring Car / F1. We also expect excellent team and communication skills, the ability to use the MS Office tools and fluent English. Potential attendance to tests and events may be required on an irregular basis.

To apply, please send your CV to jobs@hyundai-ms.com

Further information about Hyundai Motorsport is available at <http://motorsport.hyundai.com>
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CLUB AUTOSPORT

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AW-E has parted company with SVR



Whorton-Eales moves to new Clio team

Series leader quits SV Racing for Maximum Motorsport as squad plots path towards BTCC



Whorton-Eales has won twice in 2015

RENAULT UK CLIO CUP POINTS leader Ant Whorton-Eales will switch to category newcomer Maximum Motorsport for the remainder of the season.

The 21-year-old started 2015 with SV Racing but will now join Stewart Lines's squad, which is currently contesting the VW Racing Cup.

"Stewart is a long-time friend and his race trucks are actually housed at my family's business," said Whorton-Eales. "He has ambitions for bigger things for his team – including the Clio Cup – in 2015 and has asked me to be involved, so now is the time to go for it."

"I'd like to thank SV Racing for all their support in 2015 but now it's time for a change. I'm keeping my number-one mechanic from SVR and I'm seriously impressed with the set-up at Maximum. I am very confident we will be just as competitive as in the first half of the season, if not more so."

Lines said: "To come into a championship as high-profile as the Clio Cup with a driver like Ant is a very exciting opportunity for us. I certainly feel we have the infrastructure to do the job for him."

"It's a very definite step up for Maximum Motorsport as we have

every intention of being in the Clio Cup in 2016 and the future – just as we do the BTCC. We very much see Ant as an integral part of that."

"A Clio Cup team plus a BTCC team in the same paddock would make for a very attractive proposition for our VW drivers looking to a future in touring cars. This would provide a natural link-up and has the potential to attract some talent."

Whorton-Eales leads the standings by five points from Ash Hand going into this weekend's Knockhill round.

P68 CLIO CUP TITLE FIGHT

F4 top dog Palmer to make Renault debut with ART

BRDC Formula 4 Championship leader Will Palmer will step up to the Formula Renault Eurocup for next month's Silverstone round with leading squad ART Junior Team.

The 18-year-old, son of Jonathan

Palmer and younger brother of reigning GP2 champion Jolyon, will line up alongside ART regulars Ukyo Sasahara (a race winner this season) and Darius Oskoui at the French team.

"It's an extremely competitive series in

which many great drivers have appeared in the past, but I'm hopeful that with ART I can get up to speed quickly and challenge for some good results," he said.

ART boss Thibaut de Merindol added: "We follow all the F4 series across the

world to identify good drivers, and Will is certainly one of them."

Palmer will follow in the footsteps of F4 champions George Russell and Jake Hughes, both of whom have won Renault Eurocup races.



EBREY

FF1600

Middlehurst breaks leg in testing shunt

CHRIS MIDDLEHURST HAS focused on a return for this autumn's Formula Ford Festival and Walter Hayes Trophy after breaking his leg in a crash at Silverstone last week.

The National FF1600 racer was testing in the wet at Silverstone on Friday when he crashed at Luffield.

He hit the barriers at an angle, suffering a broken left leg when a wishbone punctured the side of his Mygale.

"On the way into Luffield the car went into neutral, which spat me onto the grass," said Middlehurst. "As the grass was wet I lost control. I had no time to react to get the car back into gear again.

The car hit the barriers at an angle. The wishbone came straight through into the car. It punctured my leg and left me with an open wound."

After an initial X-ray in Northampton, Middlehurst was transferred to Whiston Hospital, where he successfully underwent surgery on Saturday.

"I want to be back for the Festival in October," said Middlehurst. "That was when I was next going to race anyway. It should take six weeks to get my cast off and get back to normal.

"My focus now is now on physiotherapy – I've got certain exercises to do."

British GT

Ratcliffe to rejoin Parfitt for Snetterton British GT round

RYAN RATCLIFFE WILL REUNITE with former team-mate Rick Parfitt Jr in British GT at Snetterton this weekend.

Parfitt's regular Team LNT team-mate Tom Oliphant has prioritised the clashing round of the Ginetta GT4 Supercup at Knockhill as he is leading that series (see AUTOSPORT, August 13).

Instead Parfitt will share his Ginetta G55 GT3 with Ratcliffe, with whom he won the GT4 class title in 2013.

"Ryan is a proven talent and very fast," said Parfitt. "Plus, we have worked well as a team before so I'm hoping we can bring back a little of the magic we had at Snetterton in 2013 where we won both races."

Ratcliffe has been racing a Triple Eight BMW Z4 in the Blancpain Endurance

Series this season. He added: "I have a really good feeling about Snetterton. It's one of my favourite UK tracks and I've always gone well around there. It's great to be partnered with Rick again."



EBREY

Ratcliffe returns to partner Parfitt Jr

MSA Formula

Double R investigates Leist's engine problem

DOUBLE R RACING IS investigating the engine troubles that have hampered Matheus Leist's MSA Formula Championship bid.

Leist was ruled out of two of the three races during the last round at Snetterton with engine problems.

The Brazilian suffered a fuel-pressure problem and then overheating, which contributed to a head-gasket failure in the second race.

The engine has been sent back to tuner Sodemo for investigation into



EBREY

Leist's title bid has come unstuck

the cause of the failure. If a new engine is taken a driver must serve 10-place grid penalties for the next three races. This will be put on hold until Sodemo establishes whether or not the failure was avoidable.

Double R boss Anthony Heatt said: "Because of the penalties [for an engine change] we tried to soldier on through the weekend. Once the engine gets hot the system pressurises and that can tip the head gasket over the edge."

In brief

Scot heads south

Former Scottish karting champion Neil MacLennan will tackle selected Formula Ford 1600 races in England. The 17-year-old is weighing up an entry into the Snetterton round of the Super Series and the FFord Festival.

Butcher hooks class win

British GT challenger Rory Butcher returned to action in Porsche machinery for his debut in the GT Cup Championship at Brands Hatch last weekend. Sharing Colin Paton's Type 997 GT3 Cup machine as a replacement for Ross McEwan, Butcher helped the car to fourth overall and GTB class victory.

Ginetta to VdeV

Ginetta will field its LMP3 prototype in the next rounds of the VdeV Championship at Paul Ricard later this month. Factory squad Team LNT will run the Nissan-powered prototype in the four-hour race on August 30 with company head Lawrence Tomlinson and factory racer Mike Simpson driving.

Brian Foley 1932-2015

Brian Foley, the former Irish correspondent of AUTOSPORT, has died. Foley was well known to many leading lights of Irish motorsport, including Eddie Jordan. AUTOSPORT offers its condolences to his family and friends and thanks him for his loyal contribution to the magazine.

British GT

Malvern tests Aston Martin ahead of possible GT move

FORMER BRITISH FORMULA FORD champion Scott Malvern is eyeing a move into the British GT Championship.

Malvern tested an Academy Motorsport Aston Martin Vantage GT4 at Silverstone last week along with co-driver Nick Jones. The duo, who

share a Kevin Mills Racing Radical SR3 in the marque's one-make series, are evaluating options for next year.

"The day was very useful because GT4 is definitely on the radar for Nick and me next year," said Malvern.

"It was my first time in a GT car since my assessment for the McLaren AUTOSPORT BRDC Award [in 2011] and my first in a GT4. The Vantage felt the polar opposite of a Radical. It has loads of power and no grip, so it's great fun. It was naturally a lot heavier, but still felt pretty nimble.

"Nick adapted to the car well and I can see why they appeal to gentleman drivers. The car is very easy to get to grips with and is a proper piece of kit."



Malvern tested an Academy Aston

EBREY

Ford Fiesta

Fiesta ST series on cards

FORD RACING IS CONSIDERING introducing a new category dedicated to the current Fiesta ST next season.

The 2015 car would be faster than any competing in the existing Fiesta championship, which is why a separate series would be needed.

The new ST has a 1.6-litre EcoBoost turbo engine, which compares with the 1.6 naturally-aspirated motor in the Zetec S used in the current series.

Ford Racing UK manager Kevin Shortis said: "Once we are a bit further along the road we can see if we can put a package together. It's got to be cost effective."

"It's something I think people would like. The car will give over 200bhp, so it would be seconds quicker than the cars in the current championship."

Ford Racing UK also aims to run its own team in the existing Fiesta series for 2016 for drivers bringing budget.



Older Fiesta STs are popular

WALKER

Morgan Challenge

Big names for Morgan 30th

ONE-THIRD OF THE ORIGINAL Morgan Challenge grid will reunite at Brands Hatch later this month to celebrate its 30th anniversary.

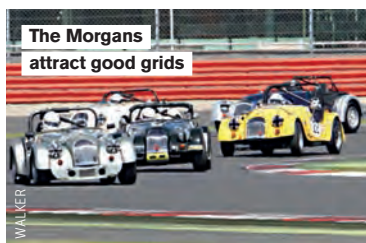
Grahame Bryant, John Milbank, Mary Lindsay, Leigh Sebba, Jack Bellinger and Barry Sumner have all raced sporadically in the series since it began in 1985. For the first time in recent years, they are set to compete against each other during the anniversary race.

"It shows the enduring appeal of the series and the cars," said Lindsay, who doubles as the series' press officer.

"In the first race, we were conscious that we were taking part in something

new and close to our hearts. I don't think any of us expected to be back on the grid together 30 years on."

The 30th anniversary event takes place at Brands Hatch on August 31, with organisers expecting a 40-car grid.



The Morgans attract good grids

WALKER

HUMBLE PYE

The voice of club racing

Silverstone offers much to club racers



WALKER

"SILVERSTONE OFFERS RACERS A CHOICE OF TRACKS"

I have lost count of the number of configurations on which I've seen action at Silverstone, the venue of my motorsporting baptism in 1958, but I've raced on six, tested on others and reported on more still since 1977. While nothing in my repertoire compares with traversing the old Grand Prix layout's late lamented Abbey sweeper at approaching 160mph in an F5000 Lola T330, I have enjoyed them all.

For club racers, the choice in recent years has been between the National circuit with the Brooklands-Luffield complex – which took away the fabled Woodcote corner, scene of so many dramatic Formula Ford finishes in the '70s – and the International course. The latter now uses most of the Grand Prix end of the campus, as opposed to the derivative I recall, which lunged deeper into Becketts, hung a shallower right then arced left down to a hairpin before rejoining Abbey via a tricky uphill exit, diving right under a bridge and cutting back into the straight before Brooklands.

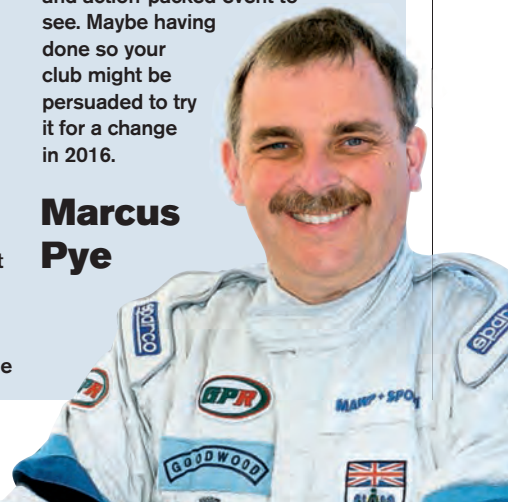
The 'new' International Circuit presents an exciting challenge, which many competitors relish as an alternative to the National with which they are so familiar. That it uses F1's Wing pits is a novelty that – now the logistics of a smaller paddock area (deemed insufficient to house the BTCC teams' paraphernalia alas, for the spectacle

would work, BRDC Clubhouse aside) and track access have been addressed – adds to the fun.

The 750 Motor Club has been subscribing to Silverstone's International course for the past couple of seasons and, having initially been sceptical (2013 was logistically difficult for various reasons), has come to enjoy it. The bottom line is a thumbs-up from its competing members who have voted with their feet and come out in strong numbers, adding considerably to the event.

This weekend the champions of affordable racing are back for another 'Summer Festival' and, with 24 races featuring all its classes spread over two full days, the programme promises to be exciting to watch as the championship races reach key stages. If you have not seen club racing on the International Circuit, this will be an interesting and action-packed event to see. Maybe having done so your club might be persuaded to try it for a change in 2016.

Marcus Pye



McMullan extended his
National Championship lead



SILVERSTONE, AUGUST 15-16 BRSCC

McMullan claims FF1600 Triple Crown

JONNY McMULLAN CLAIMED THE first major FF1600 title of the season by wrapping up the Triple Crown by a comfortable margin at Silverstone with two steady races. He maintained a strong lead in the National Championship too, on a day when the limelight fell primarily on the category's returning stars.

James Raven, the 2014 Formula Ford Festival winner having his first outing since last autumn, won both of the double-header races on the road, but was denied in the opener after collecting a penalty for infringing track limits at Copse.

Luke Williams (Ray) took the lead at Becketts on the first lap and retained his advantage until 2008 champion Graham Carroll (Van

Diemen) grabbed the lead at the Complex. Williams got the place back at Copse but lost out again, this time to Raven's Ray, at quarter-distance. A gap emerged between Raven and the rest after Williams spun at Brooklands on lap six.

Having his first outing in a Kevin Mills-run Spectrum, Stephen Daly – who had started on row four – chased Raven down and was on his tail when news of the leader's 5s penalty broke in the dying moments.

"I ran into trouble with a backmarker, then had to defend at Brooklands on the last lap," explained Raven before he learned of his demotion to second.

"It was great to come from seventh," said Daly. "I worked with

Kevin on some set-up changes to get up to speed."

Carroll emerged in third, but Williams came close to a podium position after dropping to 12th with his spin. He dived down the inside of Patrick Dussault at Becketts, taking both wide.

Daly led from Becketts at the beginning of the second encounter, but a missed gear late in the race damaged the engine. Carroll briefly took over in front but Raven was ahead by the second half of the race, with a conveniently positioned backmarker compromising his challengers. Carroll and Williams kept him in their sights.

Dussault took fourth, having survived contact with Jake Byrne at



Sullivan (left) and Fletcher
shared Mighty Mini wins

Brooklands that forced the Irishman's retirement. McMullan finished 0.2s behind Dussault – just as he had done in race one, when he took eighth – and holds a 35-point advantage with two events to go.

Jamie White continued his progress towards a hat-trick of **Super Mighty Mini** titles with a dominant victory in race one. Three different drivers held second position, with Scott Kendall nicking it back from Neven Kirkpatrick on the final corner.

The reversed grid made life tougher for White in race two, but he rose from row four to lead by one-third distance. Kendall towed ahead on Wellington Straight in the closing stages, only for White to retrieve the place by Brooklands on the penultimate lap.



Raven (25) won both
FF1600 races on the road



Janicki dominates Nippon Challenge in his Skyline

JAMES JANICKI DID THE DOUBLE in the **Nippon Challenge** in style, taking one win from pole position and one from the back of the grid.

It was Nerijus Zabotka (Subaru Impreza) who grabbed the lead at the beginning of race one. Anthony Day (Toyota MR2) was quick to pull alongside on the Wellington Straight, taking the position at Brooklands. There was no halting Janicki though. Having relegated Zabotka at Copse on the second lap, he got the power of his Nissan Skyline down effectively exiting Becketts next time around and charged to the front and the win.

Janicki was late to the grid for the second encounter, so lined up last. He was into the top three just before half-distance, then drove around the outside of Day at Brooklands to lead on lap nine. Day retired three laps later.

The Saxo of Simon James was

unstoppable in both the **Tricolore Trophy** races, with the similar car of Lee Williams chasing him home in race one. There was a number of place swaps in the fight for second position late in race two before the Clio of Russ Thomson eventually split the Citroens.

Alex Cursley bagged a brace of wins in the concurrent **Hyundai Coupe Cup** contests. Simon Miles represented a serious threat in race one, but mistakes on successive laps at Becketts allowed Jon Winter through to claim second.

In the first **MR2** race, Dave Hemingway was ahead of poleman Adam Lockwood by Copse and was not to be unseated. Lockwood, who tried hard in the opener, missed race two. Aaron Pullan occasionally got alongside the race one-winning Yorkshireman, but never ahead.

Liam Sullivan's romp towards the **Mighty Mini** championship was arrested with a fourth-place finish in the opener as nearest points rival Brayden Fletcher took the honours. Fletcher hit the front on Wellington Straight on the penultimate lap with Sullivan, who had done much of the leading, regaining second at Copse on the final tour. Nose-to-tail contact from Stuart Coombs exiting Becketts delayed both, and Steven Rideout and Caroline Gilbert pounced to complete the podium.

Sullivan bounced back in Sunday's race, which was punctuated by the safety car. Sullivan aced the restart, passing leader Fletcher at Copse to take control.

Michael Heath completed a hat-trick of wins in the **Ford XR Challenge**. Poleman Adam Burgess

slipped back to fifth, then climbed back up to second in the opener. He retired from race two and sat out the third. Rob Clapton led the second race into the final few corners, but lost out to Heath at Luffield.

JJ Ross was the dominant force in a pair of scrappy **Ford Fiesta** races. Scott Robertson defended from Kevin Stirling and Samuel Priest for much of the first race. In the second, Stirling spun down the order on the first lap. Robertson and Priest gave chase to Ross but collided at Brooklands, eliminating Priest and promoting Myles Baker to third.

Carlito Miracco took a lights-to-flag win in the **Fiesta Junior** opener, his first in car racing. Championship leader Aaron Thompson limped around with an engine-management issue in that race and wasn't

RESULTS

FF1600 NATIONAL CHAMPIONSHIP (19 LAPS)

1 Stephen Daly (Spectrum) 20m03.295s (93.25mph); 2 James Raven (Ray GR13/14) +4.683s; 3 Graham Carroll (Van Diemen JL13); 4 Luke Williams (Ray GR13); 5 Jake Byrne (Ray GR13); 6 Roger Orgee (Van Diemen RF00).

Class winners Luke Cooper (Swift SC92); Jamie Jardine (Reynard 84FF); Matthew Cowley (Reynard 88FF); Peter Hannam (Nike Mk6). **Fastest lap** Daly 1m02.502s (94.48mph). **Pole** Carroll. **Starters** 28.

RACE 2 (19 LAPS) 1 Raven 20m04.411s (93.16mph); 2 Carroll +0.222s; 3 Williams; 4 Patrick Dussault (Ray GR13/14); 5 Jonny McMullan (Van Diemen LA10); 6 Orgee. **CW** John Svensson (Van Diemen RF92); Jardine; Ben Tinkler (Reynard 89FF); Hannam. **FL** Williams 1m02.431s (94.59mph). **P** Daly. **S** 23.

NIPPON CHALLENGE AND DEUTSCHE MARQUES CUP (14 LAPS) 1 James Janicki (Nissan Skyline)

15m37.855s (88.15mph); 2 Anthony Day (Toyota MR2) +4.386s; 3 Nerijus Zabotka (Subaru Impreza); 4 Danny Cassar (Honda Integra); 5 Michael Hamlett (Honda Civic); 6 Steve Cassar (Honda Civic).

CW Day; D Cassar; James Mumbray (BMW 330); Andrew Roberts (Honda Civic); David Mustarde (Toyota MR2). **FL** Janicki 1m05.376s (90.33mph).

P Janicki. **S** 25. **RACE 2 (14 LAPS) 1 Janicki 15m34.079s (88.51mph);** 2 Zabotka +11.484s; 3 D Cassar; 4 Hamlett; 5 Lee Gillard (Subaru Impreza); 6 Andy McLennan (Suzuki Swift). **CW** Zabotka; D Cassar; Mumbray; Roberts; Mustarde. **FL** Janicki 1m04.315s (91.82mph). **P** Day. **S** 23.

TRICOLE TROPHY (11 LAPS) 1 Simon James (Citroen Saxo)

15m14.728s (71.01mph); 2 Lee Williams (Citroen Saxo) +2.249s; 3 Tony Hunter (Renault Clio); 4 Russ Thomson (Renault Clio); 5 Andrew Mitchell (Peugeot 205); 6 James Breeze (Renault Clio). **CW** Williams; Mitchell; Breeze; Matthew Holtom (Renault Clio); Jon Moore (Peugeot 106); Alex Cursley (Hyundai Coupe); Adam Shale (Peugeot 206). **FL** James 1m07.468s (87.53mph).

P James. **S** 29. **RACE 2 (14 LAPS) 1 James 15m56.971s (86.39mph);** 2 Thomson +3.349s; 3 Williams; 4 Hunter; 5 Mitchell; 6 Breeze.

CW Williams; Mitchell; Breeze; Holtom; Moore; Cursley; Jason Jesse (Peugeot 206). **FL** James 1m07.405s (87.61mph). **P** James. **S** 28.

MR2 SERIES (13 LAPS) 1 Dave Hemingway 16m10.230s (79.12mph); 2 Adam Lockwood +4.988s; 3 Nathan Harrison; 4 Aaron Pullan; 5 Paul Calloway; 6 Stephen Wright. **FL** Lockwood 1m14.012s (79.79mph). **P** Lockwood. **S** 23.

RACE 2 (13 LAPS) 1 Hemingway 16m10.011s (79.14mph); 2 Pullan +0.385s; 3 Harrison; 4 David Martin; 5 Wright; 6 David Mustarde. **FL** Pullan 1m13.864s (79.95mph). **P** Hemingway. **S** 21.

SUPER MIGHTY MINIS (16 LAPS) 1 Jamie White

20m13.142s (77.88mph); 2 Scott Kendall +5.830s;



3 Neven Kirkpatrick; 4 Ian Slark; 5 Steve Macted; 6 Steven Dawson. **FL** Kirkpatrick 1m15.222s (78.50mph). **P** White. **S** 12. **RACE 2 (16 LAPS) 1 White 20m17.188s (77.63mph);** 2 Kendall +0.145s; 3 Slark; 4 Macted; 5 Dawson; 6 Alex Comis. **FL** Slark 1m15.043s (78.69mph). **P** David Kirkpatrick. **S** 12.

MIGHTY MINIS (15 LAPS) 1 Brayden Fletcher

20m27.681s (72.15mph); 2 Steven Rideout +0.768s; 3 Caroline Gilbert; 4 Liam Sullivan; 5 Stuart Coombs; 6 Maria Brown. **FL** Fletcher 1m20.689s (73.19mph). **P** Sullivan. **S** 20. **RACE 2 (13 LAPS) 1 Sullivan 20m26.960s (62.57mph);** 2 Fletcher +0.256s; 3 Coombs; 4 Rideout; 5 Gilbert; 6 Brown. **FL** Sullivan 1m20.767s (73.11mph). **P** Josh Young. **S** 20.

FORD XR CHALLENGE (17 LAPS) 1 Michael Heath

(XR2) 21m09.670s (79.07mph); 2 Adam Burgess (XR3i) +0.442s; 3 Robert Clapton (XR2); 4 Justin Roberts (XR2); 5 Alistair May (XR2); 6 Lee Shropshire (XR2). **CW** Burgess. **FL** Clapton 1m13.445s (80.40mph). **P** Burgess. **S** 10. **RACE 2 (17 LAPS) 1 Heath 21m01.233s (79.60mph);** 2 Clapton +0.515s; 3 Shropshire; 4 May; 5 Michael Taylor (XR3i); 6 Ryan Bowron (XR3i). **CW** Taylor.

FL Clapton 1m13.386s (80.47mph). **P** Heath. **S** 9. **RACE 3 (17 LAPS) 1 Heath 21m09.205s (79.10mph);** 2 May +0.828s; 3 Clapton; 4 Shropshire; 5 Taylor; 6 Bowron. **CW** Taylor.

FIESTA CHAMPIONSHIP (16 LAPS) 1 JJ Ross (ST)

20m39.859s (76.21mph); 2 Scott Robertson (ST) +8.337s; 3 Samuel Priest (ST); 4 Kevin Stirling (ST); 5 Myles Baker (ST); 6 Jamie Going (ST). **CW** David Abbott (Zetec S); James Styles (Si); Stuart Robbins (Zetec). **FL** Ross 1m09.514s (84.95mph). **P** Ross. **S** 24.

RACE 2 (18 LAPS) 1 Ross 21m04.214s (84.08mph);

2 Robertson +12.192s; 3 Baker; 4 Richard Kemp (ST); 5 Ryan Faulconbridge (ST); 6 Stirling. **CW** David Nye (Zetec S); Peter Dendy-Sadler (Si); Robbins. **FL** Ross 1m09.664s (84.77mph). **P** Ross. **S** 23.

FIESTA JUNIORS (13 LAPS) 1 Carlito Miracco

15m39.662s (81.70mph); 2 Nathan Edwards +1.568s; 3 Ronan Quinn; 4 Michael Higgs; 5 Sikander Hussain; 6 Ben Swift. **FL** Edwards 1m11.471s (82.63mph). **P** Miracco. **S** 12.

RACE 2 (17 LAPS) 1 Miracco 20m35.145s

(81.28mph); 2 Quinn +0.263s; 3 Higgs; 4 Edwards; 5 Lewis Kent; 6 Swift. **FL** Aaron Thompson 1m11.234s (82.90mph). **P** Miracco. **S** 11.

INTERMARQUE (15 LAPS) 1 Malcolm Blackman

(Vauxhall Tigra) 15m33.334s (94.91mph); 2 Chris Brockhurst (Vauxhall Tigra) +6.837s; 3 Daniel Smith (VW Corrado); 4 Mike Thurley (Vauxhall Tigra); 5 Chris Ayling (Vauxhall Tigra); 6 Steve Burrows (Peugeot 206). **FL** Blackman 1m01.282s (96.36mph). **P** Lewis Smith (Vauxhall Tigra). **S** 13. **RACE 2 (13 LAPS) 1 Matt Simpson (Vauxhall Tigra) 15m24.653s**

(83.02mph); 2 L Smith +5.867s; 3 Blackman; 4 D Smith; 5 Thurley; 6 Richard Smith (Mercedes SLK). **FL** Simpson 1m00.922s (96.93mph). **P** Lee Griffiths (Vauxhall Corsa). **S** 14.



classified. It was back on song for race two and he charged through from row six, passing both Miracco and Michael Higgs at Copse on the same lap to lead, only for the issue to return, ending his race. Nathan Edwards took over but both he and Miracco incurred track-limits penalties. Edwards was handed

10s more, leaving Miracco to take the win again.

Matt Simpson missed the first **Intermarque** contest with a gearbox issue but rallied to win race two. Earlier, Lewis Smith had won on the road only to fail scrutineering, handing Malcolm Blackman the win.

● Ian Sowman

Bailey and Chamberlain top GT Cup

PAUL BAILEY'S ASTON MARTIN Vantage and the Porsche 935 replica of Richard Chamberlain shared **GT Cup** honours at the fourth Lotus Festival staged on the full Grand Prix circuit.

However, the pair suffered after contact with Phil Burgan's Audi R8 in the races they didn't win.

Burgan attacked Chamberlain for the lead at Stirling's early in Saturday's sprint race, putting the Porsche out with a broken intercooler duct and delaying the Audi with body damage. Burgan rejoined to finish 19th, but set the second-fastest lap to claim a front-row start on Sunday.

The incident made winning fairly easy for Bailey, almost 12s ahead of James Greenway's Porsche 997, followed by Marcus Hoggarth in his Ferrari 458. Both were class winners. These two, plus Tom Webb's BMW and the Wayne Marrs Ferrari 458, circulated together. Eighth-place finisher Tom Hibbert won GTA in his Ginetta G55.

Sunday's outing was scheduled for 50 minutes, but it took fewer than three laps for Burgan to make a bid for the lead at Hawthorn's, taking himself and Bailey off the road. The Audi rejoined unaided and caught the field, with the safety car's help, while the Aston was hauled back on to firm ground. Bailey's co-driver Andy Schulz later set fastest lap on his way to 13th and the slight consolation of third (and last) in GTO.

Chamberlain, who had started 17th, was already up to fifth by the safety car. Once racing resumed, he quickly went into the lead. Burgan moved ahead briefly when the five ahead made

their stops together, but after all had cycled through Chamberlain was in front with Burgan second.

Third was still up for grabs between 'pro' drivers Tom Ingram in the Hoggarth GTC Ferrari and Rory Butcher in Colin Paton's GTB Porsche when a red flag prompted an early stoppage, owing to cars stranded at Stirling's. This came not a moment too soon for Rob Gaffney, whose G50 broke a driveshaft and coasted to a halt in front of the pits, yet still winning GTA in the process.

Mistakes while leading cost reigning champion Jeremy Lourenco the chance of a win in Saturday's **Lotus Cup Europe** encounter.

Jonathan Walker took advantage and beat his French rival after a close duel. Despite a sideways moment at Paddock, Lourenco made amends on Sunday to beat Walker, raising his winning score to six of the last seven races.

Alex Reed set the pace in the **Lotus Cup UK** race, the longest of the weekend. Adam Gore made better work of his pitstop and emerged ahead of the teenager, who closed the gap but had to settle for second. Adrian Hall was a class-winning third despite a first-lap moment on Cooper Straight from which he was lucky to escape.

The first **Elise Trophy** race was graced by a low flypast from the

Red Arrows on their way to Biggin Hill between full-scale displays. Championship leader Luigi Mazza fended off James Little and Ryan Savage after a lengthy caution period. Craig Denman won the reversed grid second race from Jason Baker and Savage.

Steve Atkinson's Porsche 968 dominated the **Trackday Trophy**. Runners-up Bob Hosier and Nik Barton (SEAT) were helped by a safety-car intervention, but hampered by a drive-through for a pitstop infringement.

Son and father Matt and Peter Seldon headed the first **Racing Saloons** event in their M3s until Peter fell foul of backmarkers and spun. Rodney Frost was the first non-BMW driver across the line in his Jaguar XJS for a class-winning sixth. Neither Seldon appeared for race two but BMWs continued to hold sway as Stuart Waite beat Darren Stamp by 2.478s.

Invitation-class guest driver Zach Claman DeMelo (Dallara F308) blitzed the opposition in two **F3 Cup** races combined with three **Monoposto** classes. The Canadian, racing for Carlin as he gets to grips with Formula 3, was in full control, beating Aaron Steele (Dallara F307) home by 9.240s in the opening encounter and 20.400s in race two.



HAWKINS

HAWKINS

Lourenco won again in Lotus Cup Europe





Bailey took the win in Saturday's sprint race



Atkinson dominated Trackday Trophy

Steele strengthened his Cup points lead over Stuart Wiltshire (Dallara F308), who was third in race one but appeared from the paddock late for race two.

Poleman Jason Timms (Speads RM07) suffered a front wishbone failure in Saturday's race for the other Mono classes. Jason's poor luck was Dallara F399-mounted cousin Jeremy's good fortune, and he won by almost 30s.

Jeremy survived a first-corner spin in race two but was quickly at the front again. Jason claimed second position soon afterwards.

A commanding performance by Gary Feakins earned him a **Production BMW** double with William Davison runner-up in both races. Points leader Matt Swaffer had to settle for a pair of fifth places.

● Brian Phillips

Gardner and Genecand (10) battle for the FF1600 lead



OULTON PARK, AUGUST 15 BARC

Gardner beats Genecand to pair of classic FF1600 wins

DEFENDING CLASSIC FF1600

champion Mike Gardner secured a double win in his Crossle 30F. He led from the start of race one, while Ghislain Genecand in his 25F took advantage of John Village (25F) missing a gear on the opening lap to claim second. Village retained third with Stuart Kestenbaum (Van Diemen RF79) fourth after Matthew Dunne spun his 35F at Old Hall.

It was wheel-to-wheel for the whole of race two, and Gardner was unable to shake off the persistent Genecand. They exchanged places on several occasions, and touched at Island Hairpin before Gardner, complete with damaged nose, was able to make it stick at Deer Leap with two laps remaining. Village completed the podium again, with Dunne inches behind.

The **Clio Cup** also featured a double winner as Luke Herbert prevailed from pole position. Sam Randon held second place in the early stages, but once Paul Streater and Andy Jordan had ousted Brett Lidsey from third at half-distance, Streater closed in to take the

position. Randon held on to third as Jordan and Lidsey disputed fourth.

As Herbert ran clear again from the start of race two, Streater eased past Lidsey at Old Hall to secure another second place. A five-car battle built for third as Lidsey spun at Cascades, and James Dorlin clinched the place in a last-lap tussle between him, Anton Spires and Matt Allison. Luke Pinder completed another winning double in the Road Going class.

Both **Junior Saloon** races followed a pattern as Ben Colburn and Brad Hutchinson fought for the lead of the quarrelling pack of Citroen Saxos. In each encounter Colburn led out of Lodge on the final lap, only for Hutchison to power ahead to secure a fractional victory. George Sutton was third in race one, but lost out to James Clarke in the second.

Having initially lost out to the fast-starting Garry Watson (Westfield) and Joe Spencer (Locosaki), Paul Rose's Saker led the **Sports Saloons A/B/C** race from the second lap to take a comfortable win. Watson and



Colburn duels with Hutchinson

Spencer continued to duel for second until Watson pitted with a misfire. Steve Harris then reeled in and passed Spencer to make it a Saker one-two. Despite a spin at Cascades and a grassy excursion at Knickerbrook, Colin Willmott (Porsche 997) retained fourth.

A lightning start from Stuart Pearson in the Ginetta G20 gave him the lead in the class D/E/F race – at least until Deer Leap on the opening lap, when Tony Ellis (Mazda RX7) shot by. Ilsa Cox in the SEAT followed by a lap later. It was nose-to-tail for the lead throughout, but Ellis held on to claim his maiden victory. Pearson came home a lonely third.

● Peter Scherer



Herbert leads the Clio Cup field



PEMBREY, AUGUST 15-16 BARC

White records hat-trick of WRDA wins

64

DEFENDING WELSH SPORTS SALOONS champion Keith White followed up his comfortable anniversary race win with a double championship victory in his BMW Z4. White led that from the opening lap with David Krayem's Ginetta G50 heading Vaughan Fletcher's Subaru Impreza for second from lap nine.

In the first championship race Martin Davies' Ford Sierra Sapphire Cosworth had the legs of White for the first half. His lead grew decisive until he lost power steering, which allowed Krayem to secure second with Davies, surviving a late cut out, keeping Andy Williams' Sapphire at bay for third. Ken James' Loco Hornet was fifth after shaking off the duelling Mini of Peter Hills and Sam Summerhayes' Citroen Saxo.

Davies was in trouble from the start of the second championship race, which left White chasing the fast-starting Krayem into Hatchets. White was clear by the end of lap

one on his way to securing another win, with Krayem left in a solitary second. Williams was a safe third, with James, Summerhayes and Mark Harris' Mini BMW completing the top six when the race was red-flagged after a collision between Giles Beck's BMW and Roger Dowden's Davrian at Hatchets.

Andy Messham led the first **Classic Saloons & Historic Touring Car** race in his Austin Mini Seven from the opening lap, but it took until half-distance to shake off Richard Sprigg's Ford Anglia. Tony Preston's third-placed Morris Minor was the only other unlappped runner.

Roles were reversed in race two, but once Messham had retired four laps in, Sprigg was left with an increased lead over Preston and Steve Barber's Anglia.

Neil Philpotts' Mitsubishi Starion was first into Hatchets Hairpin in the opening **Classic Thunder**

encounter, but he failed to make the turn. Andy Robinson (Ford Falcon) was left virtually unchallenged, with Ian Floggatt (Subaru Impreza) second and James Vowles' SEAT Ibiza the only other finisher, two laps adrift.

Floggatt nosed ahead as the lights went out to start race two, but Vaughan Fletcher's Impreza was ahead at Hatchets. Robinson was soon into second at Hatchets, but was unable to close on Fletcher.

On lap 10 Fletcher spun and was left chasing Robinson for the next eight laps, before Robinson had an identical spin. Fletcher claimed the win, but emerging from a cloud of tyre smoke, Robinson still claimed second, with Floggatt, Vowles and Philpotts completing the order.

Ken Lark's VW Corrado had a fairly easy win in the first **Pre-2003 Production Touring Car & Classic VW Challenge**, as a three-way fight for third aided his escape. Luke

Allen led home the Honda Civic Type R trio, from Alexander Owen and George Young.

A light shower spiced things up in race two, slashing Lark's early lead. Owen led the chase from Young and took the lead into Brooklands at the halfway mark. Owen initially pulled away as Lark had Young and Allen to contend with.

Allen was into third with two laps to go and briefly headed Lark a lap later, before the Corrado driver stormed back ahead along the Speedway Straight. Lark upped the pace but Owen held on to win by 0.120s. Allen was third with Dawn Boyd's Civic fourth after Young faded and Nick Sanderson's SEAT Leon lost boost.

It remained close at the head of the **Pre-'93 Touring Car** opener, with David Hickton's BMW M3 holding off Roger Stanford in a M3 E30. Stanford's engine began to lose power in the final laps, but still

Philpotts came to grief in his flame-spitting Starion



Lark (second in queue) defeated Owen's Civic



KNOCKHILL, AUGUST 16 SMRC

Thirlwall wins to stretch Mini Cup points advantage



Thirlwall, Tanner and Mortimer shared the spoils

White leads Davies' Sapphire Cosworth

managed to hold onto a distant second, with Trevor Pickard and Henry Pickering completing the top four, after they demoted David Howard's Jaguar XJ12 late on.

Hickton led race two from lights-to-flag but the remaining podium places went down to the wire. Pickard and Michael Sheraton duelled for second until Pickering split them. Pickering soon lost out, only to fight back on the last lap after contact with Pickard, following Sheraton home for third.

Olly Allen's Fiesta annihilated the opposition in the **Pre-2005 Production Touring Cars/Blue Oval Saloons**. John Edwards-Parton and Nigel Hutton were second and third on both outings and the only drivers not to be lapped.

Mark Osborne won the opening **Pre-1983 Touring Car** race in his Triumph Dolomite Sprint. David Howard's Jaguar XJ12 was a close second with Stephen Primett securing third after Mark Fowler's Capri suffered brake failure into Hatchets. Francis Butcher was a distant fourth in a MK1 Capri, ahead of Stuart Caie.

Primett romped away to a comfortable win in race two, with Osborne and Howard nose-to-tail through to the flag. Butcher won the duel for fourth with Caie.

A one-hour **Classic Touring Car Team Relay** gave victory to the Smith family Honda CRX.

● Peter Scherer

REIGNING CHAMPION KENNETH

Thirlwall extended his lead at the top of the **Scottish Mini Cooper Cup** standings. He won the first race after leader Oliver Mortimer had a moment at Butcher's that dropped down the order.

Thirlwall led most of the second race under close scrutiny from Tanner, whose earlier result had moved him ahead of Mortimer in the points. Tanner took the lead at Duffus at two-thirds distance which allowed Mortimer to close on the pair. Three corners later, the former champion saw a gap at Clark and lunged down the inside of Thirlwall, forcing both wide. Two laps later, Thirlwall pulled a carbon copy of the move to retake the position. Post-race, time penalties for exceeding track limits were applied which handed Thirlwall the win. Later in the day, a revised result was issued which confirmed Thirlwall had also been issued with a penalty and Tanner was handed back his lost victory, with Thirlwall relegated to second.



MacKay (18) and MacLennan starred in FF



Baillie (47) raced hard with Simpson

A determined Mortimer led the final race of the day from lap two, and was never headed. Thirlwall came through to finish second while the third title protagonist, Tanner, dropped down the order after a collision at the hairpin.

Formula Ford front-runner Adam MacKay continued his fantastic season with three wins under constant pressure from team-mate Neil MacLennan. MacKay kept his cool in race one when MacLennan made contact with the back of his car at the hairpin on the penultimate lap.

MacLennan started race two from pole but was passed at Duffus at half-distance by MacKay. There were never more than a few tenths between the pair as they dropped Jordan Gronkowski in third.

It was a similar story in the final race until MacLennan made an attempt to pass at the hairpin in the closing stages. He looked poised to repeat the attempt a lap later, before having to acknowledge yellow flags. Throughout, MacKay never put a foot wrong and extended his championship lead.

Patrick Dussault, who currently sits second in the BRSCC Formula Ford series, gained experience for September's visiting round with a run to third on his maiden visit to Knockhill.

For the first time this season, the enormous **BMW Compact Cup** entry could be squeezed onto one 34-car grid and Steven Dailly proved his worth in a straightforward head-to-head with his nearest title rival Gary Clark. Although the latter took pole, he was jumped by Dailly who withstood race-long pressure to take both wins.

Ginetta G4 driver Harry Simpson was a deserved winner of both **Classics** races. After poleman Tommy Gilmartin suffered fuel problems in the first race, Keiron Baillie in his Lotus 7 hounded Simpson. Gilmartin fought through from the back of the grid in race two but couldn't catch the leaders.

Although he lies third in the standings, **Scottish Fiesta** runner Kevin Whyte upset the formbook with two dominant wins well clear of his two rivals George Orr and Wayne Macaulay.

Ian Donaldson took two straightforward wins in **Scottish Saloons and Sportscars** after further technical problems for Roddie Paterson's Caterham dropped him out of contention in the opening race. Paterson's misery was compounded when he collided with a spinning car in race two.

● Jonathan Crawford



Summers starred on his local hill

SHELSELY WALSH BRITISH HILLCLIMB, AUGUST 15-16

Summers on top after special win

AS THE OLDEST VENUE OF them all celebrated its 110th anniversary, Alex Summers took his maiden Shelsley Walsh Best Time of the Day on the hill where four generations of his family have competed. He and Gould GR61X co-driver Scott Moran dominated with a win and a second place apiece to further consolidate Summers's lead over Trevor Willis (OMS 28), who took third early on but later was fifth. Wallace Menzies (Gould GR55) recorded some excellent scores to creep closer to Willis in the overall standings; second to fourth in the table are now separated by three points.

"My first Shelsley BTD is very special because this is so close to my home and I have all of my family here today," said Summers. "I have now bettered the personal best set in my old DJ Firehawk. It's incredible that the first time I ever saw this car was when I was 15 years old, and here I am today, driving it to a win at the venue that I have known since my earliest memories."

The day's successes were marred by a shunt for Will Hall, who seriously damaged his Force WH at the Bottom Ess barriers. Hall walked away a little sore, but the car may not be ready for Gurstun Down on August 29-30.

With a fourth and fifth at his favourite hill, Tom New moved ahead of the injured Jos Goodyear. Temporarily in a wheelchair as he recovers from multiple operations on his damaged left ankle, Goodyear was royally treated and transported up to Bottom Ess, where he watched from the marshals' post.

New's co-driver Menzies had an even better time with third and fourth, which moves him within two points of Willis, although the Scot has 15 points

to drop later in the season, while Willis has none.

Among the smaller-engined giant killers, the best score went to David Uren in his tiny turbocharged Force PC. A pair of sixth places moved Uren ahead of John Bradburn (Gould GR55). On recent form Uren will at least maintain his place and may also pass the sidelined Goodyear. Championship co-sponsor Graham Wynn runs a similar Force to Uren and scored his second point of the season as he brings the car onto the pace.

In the 1600cc category, Steve Owen made one of his occasional run-off appearances in the works OMS 28 but was unable to score. Wiscombe winner Eynon Price (Gould GR59) slugged it out with Ed Hollier (Empire 00), with Hollier taking the higher run-off score and the class win.

Six points for Alastair Crawford (Gould GR55) will help to ensure he maintains his number 10 next season since Price is still 26 points adrift.

The class-based Leaders Championship is still closely fought. Alex Summers shares the lead with Colin Satchell and both won their classes, with Satchell driving his heavily modified Peugeot 205, but his lightly populated class means that his winning score will be low.

There was a big demonstration-style class of cars and drivers with a historic Shelsley connection. These included 1980 and '85 champion Chris Cramer, piloting the very first Gould some 29 years since he last drove the car.

Also wowing the large crowd was the four-wheel-drive Hepworth-Chevrolet that the late David Hepworth used to take the first sub-30 second record at Shelsley in 1971.

● Eddie Walder

RESULTS

BRANDS HATCH MSVR, AUGUST 15-16



GT CUP CHAMPIONSHIP (14 LAPS) 1 Paul Bailey (Aston Martin Vantage GT3) 21m23.928s (95.51mph); 2 James Greenway (Porsche 997 GT3) +1.779s; 3 Marcus Hoggarth (Ferrari 458); 4 Tom Webb (BMW E46 M3 GTR); 5 Wayne Marrs (Ferrari 458); 6 Gareth Downing (Lotus Evora GTE). **Class winners** Greenway; Hoggarth; Tom Hibbert (Ginetta G55). **Fastest lap** Bailey 1m29.756s (97.59mph). **Pole** Richard Chamberlain (Porsche 935). **Starters 22.** **RACE 2 (24 LAPS)** 1 Chamberlain 43m24.703s (80.71mph); 2 Phil Burgan (Audi R8 LMS ultra) +1.019s; 3 Hoggarth/Tom Ingram; 4 Colin Paton/Rory Butcher (Porsche 997 GT3); 5 Marrs/Charlie Hollings; 6 John Saunders (Ginetta G50). **CW** Hoggarth/Ingram; Paton/Butcher; Rob Gaffney (Ginetta G50). **FL** Andy Schulz (Aston Martin Vantage GT3) 1m27.723s (99.85mph). **P** Bailey/Schulz. S 22.

LOTUS CUP EUROPE (19 LAPS) 1 Jonathan Walker (Exige V6 Cup R) 31m22.461s (88.41mph); 2 Jeremy Lourenco (Exige V6 Cup R) +0.541s; 3 Gregory Rasse (Evora GT4); 4 Steve Williams (Evora GT4); 5 Xavier Georges (Exige V6 Cup R); 6 Nicholas Walker (Exige V6 Cup R). **CW** Christophe Lisandre (2-Eleven); Matt Bartlett (Exige); John Rasse (Elise Cup R). **FL** Lourenco 1m36.711s (90.57mph). **P** Walker. S 34. **RACE 2 (19 LAPS)** 1 Lourenco 31m00.661s (89.45mph); 2 Walker +0.494s; 3 G Rasse; 4 Williams; 5 Georges; 6 Jean-Baptiste Loup (2-Eleven). **CW** Loup; Nicolas Ferrer (Exige); J Rasse. **FL** Walker 1m36.978s (90.32mph). **P** Walker. S 34.

LOTUS CUP UK (35 LAPS) 1 Adam Gore (Exige V6 Cup R) 1h00m18.813s (84.72mph); 2 Alex Reed (Exige V6 Cup R) +1.981s; 3 Adrian Hall (Exige S1); 4 Ken Savage (2-Eleven); 5 Simon Deacon (2-Eleven); 6 Philip Britten/Ryan Hooker (Exige V6 Cup R). **CW** Hall; Savage; James Little/Andrew Bentley (Elise S1). **FL** Reed 1m36.884s (90.41mph). **P** Reed. S 23.

LOTUS ON TRACK ELISE TROPHY (9 LAPS) 1 Luigi Mazza 19m56.303s (65.90mph); 2 Ryan Savage +0.374s; 3 James Little; 4 Jason McNulty; 5 Jason Baker; 6 Craig Denman. **FL** Savage 1m43.493s (84.64mph). **P** Mazza. S 20. **RACE 2 (12 LAPS)** 1 Denman 21m06.099s (83.02mph); 2 Baker +0.471s; 3 Savage; 4 Little; 5 Mazza; 6 Freddie Hetherington. **FL** Mazza 1m43.519s (84.62mph). **P** SETH Walpole. S 18.

TRACKDAY TROPHY ALLCOMERS (19 LAPS) 1 Steve Atkinson (Porsche 968CS) 37m12.038s (74.56mph); 2 Bob Hosier/Nik Barton (SEAT Leon) +6.714s; 3 Alan & James Broad (Porsche Boxster S); 4 George Wright/Simon Hogg (Porsche 944); 5 Chris Mills/David Gardner (Porsche Boxster S); 6 Simon Clark (Mini Cooper S Challenge). **CW** Broad/Broad; Wright/Hogg; Mills/Gardner; Clark; Lewis Denslow/Kester Cook (Ford Fiesta); Jason Francis (Ford Puma). **FL** Atkinson 1m43.935s (84.28mph). **P** Broad/Broad. S 34.

RACING SALOONS (12 LAPS) 1 Matt Seldon (BMW E36 M3) 21m03.985s (83.16mph); 2 Stuart Waite (BMW M3) +3.858s; 3 Darren Stamp (BMW E36 M3); 4 Oliver Naaktgeboren (BMW 328i); 5 Brian Jones (BMW E36 M3); 6 Rodney Frost (Jaguar XJS). **CW** Frost; Eddie McKean (BMW E36); William Davison (BMW E30); Graham Allen (Honda Civic); Richard Ibrahim (Mini Cooper S). **FL** Seldon 1m43.127s (84.94mph). **P** Seldon. S 33. **RACE 2 (9 LAPS)** 1 Waite 15m40.186s (83.85mph); 2 Stamp +2.478s; 3 Naaktgeboren; 4 Jones; 5 Frost; 6 McKean. **CW** Frost; McKean; Ben Anderson (BMW 320i); Andy Baylie (Ford Puma); Ibrahim. **FL** Waite 1m42.883s (85.14mph). **P** Seldon - absent. S 24.

FORMULA 3 CUP/MONOPOSTO 2000/1800/DTEC (6 LAPS) 1 Zach Claman DeMelo (Dallara F308) 9m56.998s (88.03mph); 2 Aaron Steele (Dallara F307) +9.240s; 3 Stuart Wiltshire (Dallara F308); 4 Jacopo

Sebastiani (Dallara F311); 5 Robbie Watts (Dallara F302); 6 Ben Cater (Dallara F301). **CW** Steele; Watts; Adrian Holey (Dallara F300); John Whitbourn (Ray Duratec); Geoffrey Hoodless (Ralt RT1). **FL** DeMelo 1m20.246s (109.16mph). **P** DeMelo. S 32. **RACE 2 (11 LAPS)** 1 DeMelo 15m03.063s (106.70mph); 2 Steele +20.400s; 3 Louis Hamilton-Smith (Dallara F307); 4 Henry Chart (Dallara F305); 5 Sebastiani; 6 Daniel Tapinos (Dallara F311). **CW** Steele; Daryl Jones (Dallara F302); Holey; Whitbourn; Matthew Walters (Formula Ford Zetec). **FL** de Melo 1m20.135s (109.31mph). **P** DeMelo. S 31. **MONOPOSTO MOTO/CLASSIC/1600 (10 LAPS)** 1 Jeremy Timms (Dallara F399) 14m39.063s (99.64mph); 2 Marc Fortune (Jedi) +29.867s; 3 James MacLachlan (Jedi Mk4); 4 Richard Gittings (Jedi Mk6); 5 Craig Hurren (Jedi Mk6); 6 Jonathan Reed (Jedi Mk6). **CW** Bryn Tootell (Van Diemen RF99); Geoff Fern (Van Diemen RF89). **FL** Jeremy Timms 1m25.016s (103.03mph). **P** Jason Timms (Speads RM07). S 37. **RACE 2 (11 LAPS)** 1 Jeremy Timms 16m15.678s (98.76mph); 2 Jason Timms +13.717s; 3 MacLachlan; 4 Gittings; 5 Nigel Davers (Jedi); 6 Wil Arif (Mygale). **CW** Arif; Fern. **FL** Jeremy Timms 1m25.165s (102.85mph). **P** Jason Timms. S 32.

PRODUCTION BMW CHAMPIONSHIP (8 LAPS) 1 Gary Feakins 15m02.047s (77.68mph); 2 William Davison +2.963s; 3 Alex Ball; 4 Matthew Wileman; 5 Matthew Swaffer; 6 Rob Cooper. **FL** Feakins 1m51.491s (78.56mph). **P** Feakins. S 37. **RACE 2 (11 LAPS)** 1 Feakins 20m31.883s (78.22mph); 2 Davison +11.189s; 3 Wileman; 4 Ball; 5 Swaffer; 6 Cooper. **FL** Feakins 1m50.961s (78.94mph). **P** Feakins. S 37.

OULTON PARK BARC, AUGUST 15



CLASSIC FORMULA FORD 1600 (13 LAPS) 1 Mike Gardner (Crosle 30F) 20m30.969s (84.62mph); 2 Ghislain Genecand (Crosle 25F) +9.900s; 3 John Village (Crosle 25F); 4 Stuart Kestenbaum (Van Diemen RF79); 5 Chris Stuart (Van Diemen RF80); 6 Matthew Dunne (Crosle 35F). **CW** Matthew Wrigley (Merlyn Mk20). **FL** Gardner 1m33.686s (85.53mph). **P** Gardner. S 23. **RACE 2 (12 LAPS)** 1 Gardner 18m59.772s (84.37mph); 2 Genecand +0.147s; 3 Village; 4 Dunne; 5 Kestenbaum; 6 Stuart. **CW** Wrigley. **FL** Genecand 1m33.152s (86.02mph). **P** Gardner. S 22.

MICHELIN CLIO CUP (12 LAPS) 1 Luke Herbert 19m31.834s (86.02mph); 2 Paul Streather +0.656s; 3 Sam Randon; 4 Andy Jordan; 5 Brett Lidsey; 6 Matt Allison. **CW** Adam Hatfield; Luke Pinder; Tyler Lidsey. **FL** Streather 1m35.874s (83.58mph). **P** Herbert. S 16. **RACE 2 (12 LAPS)** 1 Herbert 19m29.624s (82.21mph); 2 Streather +1.688s; 3 James Dorlin; 4 Anton Spires; 5 Allison; 6 Randon. **CW** Hatfield; Pinder; T Lidsey. **FL** Herbert 1m36.148s (83.34mph). **P** Herbert. S 16.

JUNIOR SALOONS (10 LAPS) 1 Brad Hutchinson 18m28.546s (72.28mph); 2 Ben Colburn +0.099s; 3 George Sutton; 4 Edward Moore; 5 Katie Milner; 6 Liam Thompson. **FL** Hutchinson 1m49.359s (73.27mph). **P** Colburn. S 14. **RACE 2 (10 LAPS)** 1 Hutchinson 18m26.720s (72.40mph); 2 Colburn +0.048s; 3 James Clarke; 4 Sutton; 5 Moore; 6 Milner. **FL** Hutchinson 1m49.000s (73.51mph). **P** Colburn. S 13. **CNC HEADS SPORTS SALOONS, CLASSES A, B & C (15 LAPS)** 1 Paul Rose (Saker Rapx) 21m58.168s (91.19mph); 2 Steve Harris (Saker Rapx) +8.799s; 3 Joe Spencer (Stuart Taylor Locosaki); 4 Colin Willmott (Porsche 997 GT3 Cup); 5 Mark Burton (Saker Rapx); 6 Ric Wood (Audi V8 Star). **CW** Nick Cresswell (Caterham R400); Spencer. **FL** Rose 1m26.096s (93.07mph). **P** Rose. S 19.

CLASSES D, E & F (14 LAPS) 1 Tony Ellis (Mazda RX7) 22m14.066s (84.09mph); 2 Ilsa Cox (SEAT Leon Cupra) +0.825s; 3 Stuart Pearson (Ginetta G20); 4 Peter Davies (Mazda RX7); 5 Steven Hibbert (Lotus Sport Elise); 6 Steve Rowles (Honda Integra Type R). **CW** Pearson; Graham Saul (Ford Fiesta XR2). **FL** Ellis 1m33.487s (85.71mph). **P** Cox. S 23.



Chris Stuart takes a literal approach to overtaking

ROUND-UP



AUTOSPORT's Ben Anderson joined BMW throno at Brands

HAWKINS

PEMBREY BARC, AUGUST 15-16



WRDA SPORTS SALOONS (16 LAPS) 1 Keith White (BMW Z4) 16m48.309s (83.17mph); 2 David Krayem (Ginetta G50 GT4) +3.425s; 3 Vaughan Fletcher (Subaru Impreza); 4 Martin Davies (Ford Sapphire Cosworth); 5 Ben Scrivens (Ginetta G50); 6 Damian Longotano (Westfield). **CW** Fletcher; Endaf Owens (Mini Miglia); Sam Summerhayes (Citroen Saxo); Daryl Radford (Honda Civic Type R); Mark Harris (Mini BMW). **FL** White 1m01.310s (85.48mph). **P** White. **S** 24.

RACE 2 (16 LAPS) 1 White 16m56.048s (82.54mph); 2 Krayem +14.175s; 3 Davies; 4 Andy Williams (Ford Sapphire); 5 Ken James (Loco Hornet); 6 Peter Hills (Austin Mini). **CW** Davies; Hills; Summerhayes; Harris; Nicholas Roche (Ford Fiesta); Craig Wright (BMW). **FL** White 1m01.436s (85.31mph). **P** White. **S** 26. **RACE 3 (11 LAPS)** 1 White 11m32.109s (83.30mph); 2 Krayem +4.221s; 3 Williams; 4 James; 5 Summerhayes; 6 Harris. **CW** Williams; Summerhayes; Harris; Chris Morris (Suzuki Ignis Sport); Roche; Wright. **FL** White 1m01.770s (84.85mph). **P** White. **S** 23.

CLASSIC SALOONS & HISTORIC TOURING CARS (17 LAPS) 1 Andy Messham (Austin Mini Seven) 21m01.331s (70.64mph); 2 Richard Sprigg (Ford Anglia 105E) +3.388s; 3 Tony Preston (Morris Minor); 4 Keith Wright (Morris Minor); 5 Jeremy Knight (Austin A35); 6 Tim Dodwell (Austin Mini Cooper). **CW** Preston; Dodwell. **FL** Messham 1m13.032s (71.77mph). **P** Eifion Jones (Lotus Cortina). **S** 8.

RACE 2 (16 LAPS) 1 Sprigg 20m04.268s (69.64mph); 2 Preston +12.703s; 3 Steve Barber (Ford Anglia); 4 Knight; 5 Wright; no other finishers. **CW** Preston. **FL** Messham 1m12.694s (72.10mph). **P** Messham. **S** 6.

CLASSIC THUNDER SALOONS (19 LAPS) 1 Andy Robinson (Ford Falcon) 20m13.319s (82.08mph); 2 Ian Froggatt (Subaru Impreza) +50.059s; 3 James Vowles (SEAT Ibiza R); no other finishers. **CW** Froggatt; Vowles. **FL** Neil Philpotts (Mitsubishi Starion) 1m02.059s (84.46mph). **P** Robinson. **S** 5.

RACE 2 (20 LAPS) 1 Vaughan Fletcher (Subaru Impreza) 20m53.671s (83.62mph); 2 Robinson +5.623s; 3 Froggatt; 4 Vowles; 5 Philpotts; no other starters. **CW** Robinson; Vowles; Philpotts. **FL** Robinson 1m01.629s (85.05mph). **P** Robinson. **S** 5.

PRE-2003 & CLASSIC VW (14 LAPS) 1 Ken Lark (VW Corrado) 15m59.037s (76.51mph); 2 Luke Allen (Honda Civic Type R) +11.551s; 3 Alexander Owen (Honda Civic Type R); 4 George Young (Honda Civic Type R); 5 Dawn Boyd (Honda Civic Type R); 6 Allen/O'Gorman (Honda Accord). **CW** Allen; Nick Penfold (VW Golf GTi). **FL** Lark 1m06.017s (79.39mph). **P** Lark. **S** 14. **RACE 2 (17 LAPS)** 1 Owen 20m31.327s (72.36mph); 2 Lark +0.120s; 3 Allen; 4 Boyd; 5 Young; 6 James Vowles (SEAT Ibiza R). **CW** Lark; Vowles. **FL** Nick Sanderson (SEAT Leon) 1m08.404s (76.62mph). **P** Lark. **S** 15.

PRE-93 TOURING CARS (19 LAPS) 1 David Hickton (BMW M3) 21m08.544s (78.50mph); 2 Roger Stanford (BMW M3 E30) +27.636s; 3 Trevor Pickard (BMW M3 E36); 4 Henry Pickering (Vauxhall Nova); 5 David Howard (Jaguar XJ12); 6 Malcolm Wise (Ford Sapphire Cosworth). **CW** Stanford;

Pickard; Michael Sheraton (BMW E30); Andrew Anderson-Smith (Honda CRX). **FL** Stanford 1m05.390s (80.15mph). **P** Stanford. **S** 11. **RACE 2 (17 LAPS)** 1 Hickton 21m13.322s (69.98mph); 2 Sheraton +16.047s; 3 Pickering; 4 Simon Ward (Vauxhall Astra GTE 16V); 5 Wise; 6 Pickard. **CW** Sheraton; Pickering; Anderson-Smith. **FL** Hickton 1m12.741s (72.05mph). **P** Hickton. **S** 8.

PRE-2005 PRODUCTION TOURING CARS & BURTON POWER BLUE OVAL SALOONS (18 LAPS) 1 Olly Allen (Ford Fiesta) 20m19.678s (77.35mph); 2 John Edwards-Parton (Ford Fiesta) +34.433s; 3 Nigel Hutton (Ford Sapphire Cosworth); 4 Demetris Neophytou (Ford Fiesta); 5 Paul Waterhouse (Peugeot 306 GT16); 6 Jeffrey Windsor (Ford Puma). **CW** Edwards-Parton; Hutton; Waterhouse; Windsor; Kenneth Adlard (Alfa Romeo 145); Alan Willett (Ford Fiesta). **FL** Allen 1m06.332s (79.02mph). **P** Allen. **S** 13.

RACE 2 (18 LAPS) 1 Allen 20m57.173s (75.04mph); 2 Edwards-Parton +1m07.901s; 3 Hutton; 4 Waterhouse; 5 Adlard; 6 Windsor. **CW** Edwards-Parton; Hutton; Waterhouse; Adlard; Windsor; Willett. **FL** Allen 1m08.141s (76.92mph). **P** Allen. **S** 13.

PRE-83 TOURING CARS (18 LAPS) 1 Mark Osborne (Triumph Dolomite Sprint) 20m47.379s (75.63mph); 2 David Howard (Jaguar XJ12) +0.841s; 3 Stephen Primett (Ford Escort); 4 Francis Butcher (Ford Capri Mk1); 5 Stuart Caie (Ford Capri); 6 Allan Weyman (Chevrolet Camaro Z28). **CW** Howard; Caie; Weyman; Steven Watson (VW Scirocco GTi). **FL** Howard 1m08.276s (76.77mph). **P** Primett. **S** 9.

RACE 2 (18 LAPS) 1 Primett 29m36.776s (76.28mph); 2 Osborne +18.153s; 3 Howard; 4 Butcher; 5 Caie; 6 Weyman. **CW** Howard; Caie; Weyman; Watson. **FL** Primett 1m07.406s (77.67mph). **P** Osborne. **S** 8.

CLASSIC TOURING CAR TEAM RELAY (49 LAPS) 1 Smith/Anderson-Smith (Honda CRX) 1h00m07.741s (63.92mph); 2 O'Gorman/O'Gorman (Honda Accord) +2.739s; 3 Smith/Moll (VW Golf VR6/Golf GTi); 4 Norrington/Adlard (Alfa Romeo 145); 5 Lambert/Windsor (Peugeot 206/Ford Puma); 6 Palmer/Johnson (Peugeot 206). **FL** Lark/Sanderson (VW Corrado/SEAT Leon) 1m05.442s (80.09mph). **P** Lark/Sanderson. **S** 10.

KNOCKHILL SMRC, AUGUST 16



SCOTTISH MINIS (9 LAPS) 1 Kenneth Thirlwall 9m38.058s (71.009mph); 2 Joe Tanner +3.981s; 3 Lewis Carter; 4 Paul Bell; 5 Daniel Dreelan; 6 Hannah Chapman. **FL** Tanner 1m03.276s (72.079mph). **P** Carter. **S** 21. **RACE 2 (12 LAPS)** 1 Tanner 12m48.642s (71.204mph); 2 Thirlwall +0.861s; 3 Oliver Mortimer; 4 Carter; 5 Chris Reid; 6 Des Wheatley. **FL** Mortimer 1m02.751s (72.682mph). **P** Thirlwall. **S** 18. **RACE 3 (12 LAPS)** 1 Mortimer 16m40.679s (63.808mph); 2 Thirlwall +2.048s; 3 Chapman; 4 Carter; 5 Wheatley; 6 Bell. **FL** Mortimer 1m03.208s (72.156mph). **P** Wheatley. **S** 18.

SCOTTISH FORMULA FORD (ALL 12 LAPS) 1 Adam MacKay

(Ray GR14) 11m10.101s (81.674mph); 2 Jordan Gronkowski (Van Diemen JL012K) +2.671s; 3 Neil MacLennan (Ray GR09); 4 Sebastian Melrose (Ray GR14); 5 Jamie Thorburn (Ray GR15); 6 David Thorburn (Ray GR15). **CW** Ivor Mairs (Mondiale). **FL** MacLennan 54.982s (82.952mph). **P** MacKay. **S** 13. **RACE 2 (11 LAPS)** 1 MacKay 11m08.909s (81.923mph); 2 MacLennan +0.844s; 3 Gronkowski; 4 Patrick Dussault (Ray GR14); 5 Matthew Chisholm (Van Diemen RF92); 6 Melrose. **CW** Chisholm. **FL** MacLennan 55.084s (82.798mph). **P** MacLennan. **S** 14. **RACE 3 (11 LAPS)** 1 MacKay 11m08.810s (81.832mph); 2 MacLennan +0.240s; 3 Dussault; 4 Gronkowski; 5 Chisholm; 6 Melrose. **CW** Chisholm. **FL** MacLennan 55.067s (82.823mph). **P** MacKay. **S** 14.

SCOTTISH BMW COMPACT CUP (15 LAPS) 1 Steven Dailly 19m11.736s (59.400mph); 2 Gary Clark +1.076s; 3 Andrew Winchester; 4 David McNaughton; 5 Shaun Forsyth; 6 Cliff Harper. **FL** Dailly 1m03.191s (72.175mph). **P** Clark. **S** 34. **RACE 2 (14 LAPS)** 1 Dailly 17m15.008s (61.692mph); 2 Clark +0.657s; 3 Winchester; 4 Forsyth; 5 McNaughton; 6 Harper. **FL** Dailly 1m02.980s (72.417mph). **P** Dailly. **S** 32.

SCOTTISH CLASSIC SPORTS AND SALOONS (BOTH 12 LAPS) 1 Harry Simpson (Ginetta G4R) 11m47.845s (77.319mph); 2 Keiron Baillie (Lotus 7) +1.672s; 3 Bruce Weir (Datsun 240Z); 4 Matthew Gordon (TVR 3000M); 5 Alasdair Coates (Ford Mustang); 6 Jimmy Crow (Ford Escort). **CW** Weir; Coates; Crow; Mike Stewart (Marcos GT); Rodger Motherwell (Alfasud Sprint). **FL** Simpson 57.896s (78.776mph). **P** Tommy Gilmartin (Morgan +8). **S** 16.

RACE 2 (14 LAPS) 1 Simpson 11m45.963s (77.525mph); 2 Baillie +1.799s; 3 Gilmartin; 4 Weir; 5 Stan Bernard (Porsche 911); 6 Gordon. **CW** Gilmartin; Weir; Stewart; Crow; Ian Daltrey (Alfasud TI). **FL** Baillie 57.943s (78.713mph). **P** Simpson. **S** 16.

SCOTTISH FIESTAS (13 LAPS) 1 Kevin Whyte (Fiesta ST) 15m02.387s (65.705mph); 2 George Orr (Fiesta ST) +1.719s; 3 Wayne Macaulay (Fiesta ST); 4 Peter Cruickshank (Fiesta ST); 5 John Balfour (Fiesta ST); 6 Stephen Ward (Fiesta ST). **CW** Steven Gray (Fiesta XR2). **FL** Whyte 1m02.324s (73.180mph). **P** Whyte. **S** 15. **RACE 2 (14 LAPS)** 1 Whyte 17m17.440s (61.547mph); 2 Orr +2.475s; 3 Macaulay; 4 Balfour; 5 Cruickshank; 6 Andrew Christie (Fiesta ST). **CW** Gray. **FL** Whyte 1m02.433s (73.052mph). **P** Whyte. **S** 15.

SCOTTISH SALOONS AND SPORTSCARS (12 LAPS) 1 Ian Donaldson (Mitsubishi Evo) 11m06.071s (82.169mph); 2 Finlay Crocker (SEAT Leon Eurocup) +1.549s; 3 Andrew Morrison (SEAT Leon); 4 Andrew Mackie (Mitsubishi Evo); 5 Mark Dawson (VW Corrado); 6 Fiona Kindness (Subaru Impreza). **CW** Crocker; Mackie; Iain Sinclair (Westfield); Michael Kelly (Mazda MX5). **FL** Roddie Paterson (Caterham) 52.774s (86.422mph). **P** Paterson. **S** 17. **RACE 2 (14 LAPS)** 1 Donaldson 15m05.817s (70.491mph); 2 Crocker +4.392s; 3 Morrison; 4 Mackie; 5 Dawson; 6 Allister McMillan (Nissan Primera). **CW** Crocker; Mackie; Sinclair; Oilly Ross (Mazda MX5). **FL** Donaldson 54.175s (84.187mph). **P** Donaldson. **S** 17.



Thirlwall and Mortimer clash in Scottish Minis

MOIR

SCOTTISH LEGENDS (8 LAPS) 1 Alan Freeland 8m09.962s (74.468mph); 2 John Paterson +1.145s; 3 Euan McKay; 4 David Hunter; 5 Warren Allan; 6 Scott Hynds. **FL** McKay 59.678s (76.424mph). **P** McKay. **S** 16. **HEAT 2 (11 LAPS)** 1 Hunter 14m29.882s (57.674mph); 2 Paterson +0.127s; 3 Hynds; 4 Freeland; 5 Ivor Greenwood; 6 McKay. **FL** Paterson 59.972s (76.049mph). **P** Greenwood. **S** 16. **FINAL (10 LAPS)** 1 Paterson 10m16.133s (74.024mph); 2 Hunter +3.424s; 3 Freeland; 4 McKay; 5 Allan; 6 Greenwood. **FL** Hynds 1m00.028s (75.979mph). **P** Ian McLeish. **S** 16.

HILLCLIMB SHELLEY WALSH, AUGUST 15-16



ROUND 25 (1 Alex Summers (3.5 Gould-NME GR61X) 23.05s BTD; 2 Scott Moran (3.5 Gould-NME GR61X) 23.60s; 3 Trevor Willis (3.2 OMS-RPE 28) 23.82s; 4 Wallace Menzies (3.5 Gould-NME GR55) 24.01s; 5 Tom New (3.5 Gould-NME GR55) 24.06s; 6 Dave Uren (1.3t Force-Suzuki PC) 24.15s; 7 John Bradburn (3.5 Gould-Cosworth GR55) 24.27s; 8 Alastair Crawford (2.8 Gould-NME GR55) 24.52s; 9 Ed Hollier (1.6 Empire-Suzuki 00 Evo) 25.60s; 10 Eynon Price (1.6 Gould-Suzuki GR59) 25.62s; 11 Steve Owen (1.6 OMS-Suzuki 28) 25.90s; DNF Will Hall (2.0 Force-AER/XTC WH).

ROUND 26 (1 Moran 23.14s; 2 Summers 23.19s; 3 Menzies 23.54s; 4 New 23.68s; 5 Willis 23.87s; 6 Uren 24.11s; 7 Bradburn 24.50s; 8 Crawford 24.81s; 9 Hollier 25.56s; 10 Graham Wynn (1.3t Force-Suzuki PC) 25.71s; 11 Price 25.96s; 12 Owen 26.22s.

CLASSES Paul Jones (1.8 Lotus Elise 135R) 34.18s; Mark Spencer (3.6t Porsche 996) 31.50s RECORD; Ash Mason (1.3s Westfield SEI) 30.06s; David Connell (2.2s Vauxhall VX220) 35.45s; Tim Dennis (1.4 Morris Mini-Cooper) 32.95s; Colin Satchell (2.0 Peugeot 205) 31.12s; Mike Turpin (2.2s Vauxhall VX220) 30.08s; Charles Williams (OMS-Honda SC1) 31.12s; Nic Mann (1.7t Mannic-Beattie) 26.86; Jan Nycz (0.5 Staride-Norton) 39.28s; Gary Hill (0.6 OMS Hornet) 29.89s; Chris Aspinall (1.0 Empire-Suzuki Wraith) 26.72s; Hollier 25.30s; Howard Savage-Jones (2.0 Lola-TKD Colgan) 26.93s; Uren 24.53s; Moran 23.35s.

CHAMPIONSHIP POSITIONS AFTER ROUND 26
1 Summers 192; 2 Willis 154; 3 Menzies 152; 4 Moran 151; 5 Hall 118; 6 New 97; 7 Jos Goodyear 87; 8 Uren 75; 9 Bradburn 74; 10 Crawford 62.

Triple A power

Ant Whorton-Eales, Ash Hand and Ashley Sutton are almost impossible to split in a Renault Clio Cup title fight that has captured the imagination of the BTCC crowds. **STEPHEN LICKORISH** gets to know them



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The only thing that seems certain at the mid-point of an incredibly competitive Renault Clio Cup season is that a 21-year-old with a first name beginning with the letter A will win the title.

The battle between the evenly matched Ant Whorton-Eales, Ash Hand and Ashley Sutton has been a key factor in producing the action-packed racing seen so far on the TOCA support package in 2015, with non-stop drama from the very first race.

"It's so close at the minute between us and you know that each of you has the ability to win every single race, so it's tight," says Hand, whose five victories make him the man who's stood on the top step of the podium most often.

Whorton-Eales, who leads the points heading to Knockhill this weekend, agrees: "It's so unpredictable. You can get the qualifying times but you can't just assume the driver on pole will have the fastest car."

At this stage, Whorton-Eales has a slender advantage at the top over the Pyro-run Hand. But it will be intriguing to see how he fares now he's switched teams for the second half of the season, leaving the SV squad he's raced with since 2013. Joining series newcomer Maximum Motorsport is certainly a surprising move at such a crucial time in the championship.

Both Whorton-Eales and Hand have been in the category for several seasons, but after a year in the defunct KX Academy they have improved this term.

This season, Hand has received tutoring from three-time World Touring Car champion Andy Priaulx, something that has had a significant impact on the way he prepares for races.

"He is becoming a lot more logical with his thinking, a lot less emotional and he's doing his preparation," explains 2015 British Touring Car Championship race winner Priaulx. "Before, he relied on natural talent, which isn't enough.

"His preparation has improved a lot," continues Priaulx. "We've given him a process that we've refined every race and he's getting stronger and stronger by eliminating weaknesses. Ash is very quick and naturally talented, but before he was up and down."

Sutton is also receiving mentoring from a current British Touring Car driver as he is supported by the BMR squad – although still run by Pyro – from which BTCC race winner and Clio Cup graduate Aron Smith has been offering advice.

Sutton's made the transition to tin-tops this year after a rollercoaster season in British Formula Ford that followed a two-year break while he recovered from a road-car accident.

"We had a very strong winter-testing programme," says Sutton. "I was learning the car. I had never really driven a front-wheel-drive car – sitting on the wrong side with a roof over my head – so it was all completely opposite to what I was used to. To turn up at round one and put it on pole was fantastic.

"Don't get me wrong, we did many laps in testing to get on the pace of these guys. They have the year's experience over me so I'm the new kid on the block but I feel the way we adapted to the car has been good."

Pyro boss Mark Hunt was certainly impressed with how quickly Sutton got onto the pace of the frontrunners.

"It shows the quality of his driving and his experience in single-seaters," says Hunt. "What he learned in karting and single-seaters has been brought into Clios. Before testing pre-season I thought it would take a bit more work but he was very fast as soon as he got into the car."

That was evident from the outset at Brands, when Sutton led for the majority of the opening round until a last-lap lunge from Whorton-Eales at Clearways robustly gave the SV man the opening win. Hand took third, and with 0.508s separating the top three it became the closest finish in the series' history. It also captured the attention of the public and set the tone



Sutton (l) leads from pole on his debut at Brands in April

TITLE-FIGHT TRIO

Ant Whorton-Eales
SV Racing/
Maximum
Motorsport

Age 21
From Lichfield
2015 wins 2
Championship
position 1st
Points 270



Ash Hand
Pyro

Age 21
From Nuneaton
2015 wins 5
Championship
position 2nd
Points 265



Ashley Sutton
BMR with Pyro

Age 21
From Bishops
Stortford
2015 wins 2
Championship
position 3rd
Points 244



Team-mates Hand and Sutton have a healthy mutual respect

“You can’t just assume the driver on pole will have the fastest car”

Ant Whorton-Eales

for the rest of the season.

“Social media went crazy,” laughs Sutton. “We both had little groups of people that were fighting our own battles and we were sitting there just reading it. They did more fighting talk than we did I think.”

After Brands came a triple-header at Donington – one of the Brands races was cancelled following a first-lap shunt – that featured arguably the best Clio racing for years.

There were five-car lead trains, overtaking throughout the field and the passing was generally clean (not always a given, as Brands had shown).

“At Donington I felt like there was a lot of respect,” says Sutton. “There were five of us together – and there was a little bit of contact here and there – but we were all passing cleanly and giving the space when it was needed, and that’s what made the racing really good to watch and be a part of.”

Hand adds: “The defending wasn’t too heavy and it was like we were actually out there to race. I think sometimes you can kill a race if you defend too much because it gives you no opportunity to win the race or pull away. So racing like that at Donington was good fun.”

At Thruxton the Pyro team-mates worked together to dominate both races, despite a last-corner collision between the two in the second race. But it’s clear that the duo is unlikely to work so closely together now that every point is becoming crucial.

“We’re out there to win – I’m not going to be settling for second and neither will Ash,” says Sutton. “At the end of the day we will work together when it’s needed but there’s also going to be a time where we will split and go different ways. But we’re still there getting out the car congratulating each other.”

“We respect each other enough to know if he’s driven the better race you’re not going to knock him off if he’s defending or push him,”

adds Hand. “But I think it will get tight.”

At Oulton Park, however, contact became excessive with Whorton-Eales among those penalised after an overly aggressive move on Hand. And tensions could boil over at the business end of the season, especially as it’s Whorton-Eales who leads the points but Hand who has the speed advantage, claiming half the poles and winning half the races to date.

But for a tangle with series veteran Paul Rivett – who the trio refuse to rule out as a title contender – at Donington, Hand would be at the top of the points. Sutton, meanwhile, has suffered from some bad luck, notably at Oulton when he hit a dislodged tyre stack that forced him into retirement.

Consistency, with the exception of a qualifying crash at Croft that forced him into damage-limitation mode, has kept Whorton-Eales in front despite not winning a race since April, and he needs to maintain that points-scoring mentality in his new surroundings. That’s proving his main motivation, as he’s aware he cannot afford to lose points in this fiercely contested title fight.

“I’ve just been really consistent this year,” he says. “Apart from Croft, we’ve only had one race off the podium. But these boys are really quick and it’s all tightening up.”



Teddington Studios, Broom Road, Teddington, Middlesex TW11 9BE, UK.
Tel: +44 (0) 20 8267 5804 Fax: +44 (0) 20 8267 5922
E-mail: autosport@haymarket.com Website: www.autosport.com

EDITOR
Edd Straw ext.5889
edd.straw@haymarket.com

DEPUTY EDITOR
Marcus Simmons ext.5807
marcus.simmons@haymarket.com

CHIEF F1 CORRESPONDENT
Ian Parkes ext.5810
ian.parkes@haymarket.com

GRAND PRIX EDITOR
Ben Anderson ext.5425
ben.anderson@haymarket.com

F1 REPORTER
Lawrence Barretto ext.5887
lawrence.barretto@haymarket.com

FEATURES EDITOR
Scott Mitchell ext.5370
scott.mitchell@haymarket.com

EDITOR AUTOSPORT.COM
Glenn Freeman ext.5309
glenn.freeman@haymarket.com

DEPUTY EDITOR AUTOSPORT.COM
Matt Beer ext.5811
matt.beer@haymarket.com

INTERNATIONAL EDITOR
Mitchell Adam ext.5432
mitchell.adam@haymarket.com

MANAGING EDITOR
Peter Hodges ext.5903
peter.hodges@haymarket.com

EXECUTIVE EDITOR
Stuart Codling ext.5835
stuart.codling@haymarket.com

GROUP NATIONAL EDITOR
Rob Ladbrook ext.5209
robert.ladbrook@haymarket.com

RALLIES EDITOR
David Evans
david.evans@haymarket.com

ART EDITOR
Lydney Row ext.5914
lydney.row@haymarket.com

SENIOR DESIGNER
Michael Cavalli ext.5381
michael.cavalli@haymarket.com

PHOTOGRAPHS
LAT Photographic
XPB Images

GROUP PICTURE EDITOR
Peter Mills ext.5918
peter.mills@haymarket.com

AUTOSPORT.COM TECHNICAL TEAM LEADER
Geoff Creighton
geoff.creighton@haymarket.com

SENIOR DIGITAL DESIGNER
Amar Vijay
amar.vijay@haymarket.com

OFFICE MANAGER
Joanne Grove ext.5804
joanne.grove@haymarket.com

SPECIAL CONTRIBUTORS

Gary Watkins	Mark Glendenning	Alan Eldridge
Henry Hope-Frost	Dieter Rencken	
Marcus Pye	Gary Anderson	

CORRESPONDENTS

ARGENTINA Tony Watson	GREECE Dimitris Papadopoulos	USA Jonathan Ingram, David Phillips, Robin Miller, Jeremy Shaw
AUSTRALIA Phil Branagan	ITALY Roberto Chinchero	UK & IRE Peter Allen, Jonathan Crawford, Kerry Dunlop, Tom Errington, Leanne Fahy, Paul Healy, Linda Keen, Alex Kalinauckas, Lewis Larkam, Mark Libbeter, Stephen Lickorish, Marc Orme, Dan Paddock, Graham Read, Hal Ridge, Aaron Rook, Peter Scherrer, Ian Sowman, Oliver Timson, Ian Titchmarsh, Eddie Walder, Richard Young
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ADVERTISING
Tel: +44 (0) 20 8267 5389
Fax: +44 (0) 20 8267 5850
E-mail: autosport.ads@haymarket.com

AD PRODUCTION
Tel: +44 (0) 20 8267 5588
Fax: +44 (0) 20 8267 5320

SALES MANAGER
Jonathan Whitehead ext.5908
jonathan.whitehead@haymarket.com

CLASSIFIED ADVERTISING
Jamie Brooker ext.5271
jamie.brooker@haymarket.com

SPECIAL PROJECT SALES
James Robinson ext.5384
james.robinson@haymarket.com

DISPLAY ADVERTISING
Gary Lee Hoebeek ext.5276
garylee.hoebeek@haymarket.com

ADVERTISING DIRECTOR
Matthew Witham

GROUP PRODUCTION MANAGER
Alisa Donovan ext.5639
alisa.donovan@haymarket.com

PRODUCTION CONTROLLER
Jessica McInnes ext.5588
abby.gunner@haymarket.com

ONLINE ADVERTISING
Leah Mims ext.5846
leah.mims@haymarket.com

SUBSCRIPTIONS
UK 0844 848887
OVERSEAS +44 (0)1795 592 974
EMAIL autosport@servicehelpline.co.uk
BACK ISSUES Tel: 0844 848887

DIRECT MARKETING EXECUTIVE
Kadie Chanter ext.5622
kadie.chanter@haymarket.com

LICENSING AND SYNDICATION INTERNATIONAL DIRECTOR
Alastair Lewis ext.8606
alastair.lewis@haymarket.com

SYNDICATION ENQUIRIES
Isia Friend ext.5024
isia.friend@haymarket.com

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MANAGEMENT

GROUP DIRECTOR
Tim Bailey

GROUP PUBLISHER
Stuart Williams

GROUP EDITOR
Anthony Rowlinson

GROUP COMMERCIAL DIRECTOR
Ben Guyman

SPECIAL EVENTS MANAGER
Laura Coggin

DIGITAL SPECIAL PROJECT MANAGER
Simon Strang, ext. 5093
simon.strang@haymarket.com

DIGITAL PRODUCT MANAGER
Simon Grayson, ext. 5340
simon.grayson@haymarket.com

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THIS WEEK

LETTERS • ON TRACK • TV PICKS • FROM THE WEB • AUTOSPORT.COM

Want to have your say on motorsport? Email autosport@haymarket.com



What chance our Jensen of donning red next year?

F1 silly season's in full swing

I was intrigued by Dieter Rencken's column about how the wee-baby Max Verstappen may hold the key to the silly season. Given that Max is stuck at Toro Rosso, Bottas doesn't seem to want to sign a single-season contract (for good reason – look at Perez and Magnussen), and Kimi's badly underperforming, could there be another option for Ferrari for next year?

Jensen Button is being walked over by his team, comparing very favourably with Alonso (Kimi didn't last year), paid a fraction of what Alonso is paid, and is

probably out of a drive at the end of the year. Why not go out on a high note? It's apparent that he just wants to drive, based upon his pay cuts, and seemingly accepting a #2 role at McLaren.

With Kimi so far behind and Ferrari having a specific gap that they're trying to fill, is there any chance that Button ends up wearing red next year? I see how the pieces could fall for that to be able to happen technically, but is there any chance of it actually happening in reality?

Peter Duggan, by email

Would like to say how nice it has been over the last two editions to have some interesting articles about something other than Mr Hamilton. It does get a bit wearing hearing about nothing but him when there are more interesting things to show in your pages.

Derek Wellman
By email

I've been picking up my copy of AUTOSPORT since 1991 and I must say your 1990 special (August 13) is one of your finest, even down to the early '90s fonts you used. It brings back so many memories of when F1 seemed to be so much more colourful and exciting.

Matthew Deluchi
By email

Well done Susie Wolff for showing that women can deal with the physical demands at the highest level of motorsport (August 6). I, for one, am glad to be proved wrong.

But I disagree with Abbie Eaton when she says "getting more girls is good, but it has got to be the right ones". Every weekend hundreds of not very talented men have fantastic fun racing in friendly competition with each other, so why shouldn't women be joining us? The more talented ones will soon work their way to the front.

You don't have to be young, rich and good looking to be a racing driver, and you don't have to be a man either.

Martin Kemp
Average 750 Formula driver

The fundamental problem with Formula 1 is the unequal distribution of income. It guarantees a few winners and many losers. It's like building a football pitch on a hillside, so one team has to struggle uphill and the other can run downhill.

This means that F1 is not a sport. It is reality TV with a manipulated script. The FIA, as a sporting authority, should require the equitable distribution of revenues to all F1 participant teams. Otherwise it should revoke Bernie's sanction to operate F1, and grant the right to sanction the world championship to some other operator that will guarantee a fair contest.

Bruce Merchant
Big Sur, California

BIG NUMBER

900

Ferrari will start its 900th world championship race in Belgium. It has missed only 27 races

MILESTONE

The F1 world championship and the WRC won't be far apart this weekend. While F1 is at Spa, Rally Germany is based in Trier, just 70 miles away



WHAT'S ON TRACK IN THE UK

EVENT OF THE WEEK



Will the BMR VWs triumph again?

BTCC KNOCKHILL

August 22-23
The north-of-the-border faithful will hope local hero Gordon Shedden can bounce back from his Snetterton

disaster and take the fight back to new series leader Jason Plato and the BMR VW squad. Support action comes from MSA Formula, Clios, Porsches and the two Ginetta series.



BRITISH GT SNETTERTON

August 22-23
British GT (above) resumes with two 60-minute races, both of which are on Sunday. BRDC Formula 4 is also on the bill along with Ginettas and VWs.

BRANDS HATCH BRSCC

August 22-23
Caterhams lead the way with the Tracksport, Roadsport and Supersport series. Also on are OSS sportscars, Porsches, Alfas and Production GTIs.

MALLORY PARK VSCC

August 22
The Bob Gerard Memorial Trophy for pre-1961 racing cars takes top-billing, along with a handicap race for Edwardian racers.

SILVERSTONE 750MC

August 22-23
Wall-to-wall action with 24 races from the club's series.

OULTON PARK BRSCC

August 22
A packed programme includes Formula Ford 1600 (below) plus MX5s and Sports 2000.



BOURNE

ANGLESEY BARC

August 22-23
The 25th running of the Citroen 2CV 24-hour race promises a madcap mix of tin-snail triumph and heartbreak.

DONINGTON PARK BRSCC

August 22
The Beetle clones of the Fun Cup take over for a four-hour enduro and a one-hour 'sprint'!

WHAT'S ON TRACK AROUND THE WORLD

BELGIAN GRAND PRIX

Formula 1 World Championship
Rd 11/19
Spa, Belgium
August 23
f1.com

GP2 SERIES

Rd 7/11
Spa, Belgium
August 22-23
gp2series.com



INDYCAR

PERCEWILLIAMS/LAT

GP3 SERIES

Rd 5/9
Spa, Belgium
August 22-23
gp3series.com

PORSCHE SUPERCUP

Rd 6/8
Spa, Belgium
August 22-23
porsche.com

RALLY GERMANY

World Rally Championship
Rd 9/13
Trier, Germany
August 20-23
wrc.com

INDYCAR SERIES

Rd 14/15
Pocono, Pennsylvania, USA
August 23
indycar.com

WORLD RALLYCROSS

Rd 8/13
Hell, Norway
August 22-23
rallycrossrx.com

NASCAR SPRINT CUP

Rd 24/36
Bristol, Tennessee, USA
August 22
nascar.com

SUPER FORMULA

Rd 4/7
Motegi, Japan
August 23
superformula.net

JAPANESE FORMULA 3

Rd 7/8
Motegi, Japan
August 22-23
j-formula3.com



Formula 1 arrives at evocative Spa

XPB IMAGES

UNITED SPORTSCAR

Rd 8/10 (GT classes only)
Virginia International Raceway, USA
August 23
imsa.com

V8 SUPERCARS

Rd 8/14
Eastern Creek, New South Wales, Australia
August 22-23
v8supercar.com.au

FROM THE SOFA

WHAT'S ON TELEVISION

Q&A

HARVEY/O'NEILL RACERS TO COMMENTATORS

@pauloneill129 & @timharvey7

AUTOSPORT: How did the move from racing to TV come about?

Tim Harvey: They basically look for drivers who have always had too much to say for themselves. We both fit.

Paul O'Neill: And they never would have asked if I'd never won a race.

TH: The difference when you listen to commentators who aren't drivers is they are telling you factually what's happening, but not understanding the race. When we commentate it's like being in the race. You have a sixth sense about what's going to happen based on what you'd feel like if you were in the situation.

AS: Has moving into a media role changed the way teams and drivers act with you?

PO: Certain people are a bit more pally now. One person in particular who I don't race against anymore tries to be my best mate!

TH: It's a much more open paddock because they know you've got the microphone. If they want to be talked about they have to talk to you.

AS: What's the toughest thing you've had to adjust to?

PO: When you've got Louise Goodman asking you questions as a driver, that's a piece of piss. I probably do more pieces-to-camera than Tim and I suffer with anxiety. Now I'm used to it it's not too bad, but when it's me, on my own, looking down the camera, it's live, I've got problems in my earpiece... I'm thinking, 'Fuck, fuck, fuck.'



Harvey gets the lowdown in the pits



O'Neill gets plenty of screen time now

TH: That, to us, is what makes what Steve Rider does seem incredible. We know what goes wrong behind-the-scenes and he makes it all seem perfectly calm.

AS: Did you seek any advice before moving into media?

TH: No, absolutely no media training.

PO: None at all. I should get some really. Toby Moody gives me pointers and Tim's helped me with different things.

TH: There are a million things you can do wrong and most presenters do most of it right naturally. You watch other people and pick things up and know what works and what doesn't.

PO: We're racing drivers as well. ITV would rather us be those kinds of people. I was always told to be myself.

AS: Any 'I can't believe that just happened' moments?

"I just panicked! She was 6'8" so I said, 'You're massive!'"

TH: I remember the final race of 2008. Fabrizio Giovanardi was in the Vauxhall and he had a clash with someone coming onto the GP circuit. And somebody shouted 'fuck' in my earpiece, and I thought it was [co-commentator] Ben [Edwards]! I looked at him in horror but it turned out it was someone in the office watching it. We both thought the other had swore live on air.

PO: I got a phone call, really late doors, just before a Snetterton race in 2012, to get to the front of the grid. When I got there they said, 'You've got to interview the grid girls!' It came across absolutely horrendous...

TH: 'You're massive!'

PO: I just panicked! She was about 6'8"! I just didn't know what to say, and just came out with, 'So what do you have to do to be a grid girl because you're massive' – and then I panicked again, saw she had big shoes on, and said, 'And look at the feet on her!' All I could hear in the feedback was Tim and Toby pissing themselves with laughter.

Harvey and O'Neill were talking to Scott Mitchell

TV pick of

Edited by Jordan Harvey and



BELGIAN GP LIVE

Sky Sports F1 Sunday 1130-1530

BBC1 Sunday 1210-1530

Formula 1 returns after the summer break to visit one of motorsport's most treasured circuits: Spa Francorchamps.

Champions Mercedes and Lewis Hamilton have had several weeks to dwell on (or forget) "a bad day at the office" in Hungary, but last year Belgium was a similar story as Daniel Ricciardo made the most of Hamilton and Nico Rosberg's clash. Fans have a choice between BBC or Sky coverage, since Belgium is one of the year's free-to-air races. Substantial coverage is planned on both channels.



INDYCAR POCONO - LIVE

ESPN

Sunday 1900-2230

Pennsylvania's Pocono Speedway is known as the 'Tricky Triangle', but could it prove tricky for any of the challengers for the IndyCar title? Juan Pablo Montoya now has Graham Rahal hot on his heels, nine points behind entering the penultimate round. Double points for the finale keep eight others in the hunt too.

Penske's Montoya is chasing a first title since his 1999 CART glory, and he won at Pocono last year, while Rahal has come of age in 2015 and is looking to join his father Bobby Rahal as an IndyCar champion.

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ONLINE

Top stories on AUTOSPORT.com in the past week

TWO TEAMS FAIL WITH F1 ENTRY BIDS

AUTOSPORT revealed last week that the FIA rejected applications from two new teams to join the Formula 1 grid in the near future.

MCLAREN HAS NO 'PLAN B' FOR ENGINES

The McLaren-Honda partnership has to work in the long term, because the team doesn't have any other options it can explore in the future.

'NO WAY' MAGNUSSEN WON'T RACE IN 2016

After a season on the sidelines, McLaren reserve Kevin Magnussen will look to race elsewhere next year if his hopes of returning to an F1 race seat don't materialise.

ECCLESTONE WANTS RENAULT WORKS TEAM

F1 supremo Bernie Ecclestone wants Renault to commit to a full works project again when it decides on its future in the next few weeks.

MANY REASONS FOR POOR MERCEDES START PERFORMANCE

Mercedes motorsport chief Toto Wolff explained some of the team's findings following a thorough investigation into its recent poor getaways.

AUTOSPORT+ ANDERSON ON STARTS, COSTS AND UNDERDOGS

Gary Anderson answers your questions about F1's start-rule changes, Jaguar F1's failure and why costs keep rising.

the week

Tom Corbett



WORLD RALLYCROSS - HELL Eurosport 2 Sunday 1800-1900

Norway's motorsport hero Petter Solberg had a difficult trip to Canada for the last World Rallycross round. The points leader and reigning champion failed to qualify for the final for the first time. Now he heads for Hell, his ominously named home round.

Although you'll need World RX's web stream to watch live, Eurosport has highlights soon afterwards, repeated on Tuesday night. If you prefer your rally-esque motorsport more traditional, it's Rally Germany this weekend as well with the usual mix of BT and Motors coverage.



SNETTERTON BGT - LIVE Motors TV Sunday 1235-1800

Substantial live coverage on Motors TV is a big boost for British GT this year. Thrilling action last time at Brands Hatch proves the series deserves it too. Alexander Sims and Marco Attard have a 34-point lead in GT3, but just 13.5 separate the next six drivers.

Motors isn't just showing British GT either, mirroring ITV's TOCA coverage (which is from Knockhill this weekend) by including the VW Cup, BRDC Formula 4 and Ginetta support classes live between the British GT races.



CLASSIC F1: JAPAN 1989 Sky Sports F1 Sunday 1620-1800

As the 21st century McLaren-Hondas start to edge forward, relive the culmination of the extraordinary intra-team rivalry that characterised the alliance's eventful first Formula 1 project: Ayrton Senna versus Alain Prost.

With Prost leading the championship by 16 points heading to Suzuka, the pressure was on Senna. Excitement, controversy and heartbreak would follow, as the two greats went head to head amid a background of huge off-track tension. There could be only one champion – but there was an unlikely race winner too.



BRISTOL NASCAR - LIVE Premier Sports Sunday 0000-0430

The tight Bristol Motor Speedway is always a fraught stop on the NASCAR calendar, and with just three rounds to go before the Chase cut-off, Saturday night's race is going to be no exception.

Champion Kevin Harvick may hold the (fairly irrelevant) points lead, but it's the Joe Gibbs Racing Toyota package on form – with seven wins between Kyle Busch and Matt Kenseth over the last nine rounds. Questions are being asked about Hendrick, too, amid a lengthening dry spell, as Jeff Gordon remains win-less in his farewell season.

HOT ON THE WEB THIS WEEK

YouTube **FERNANDO ALONSO TAKES A BUSMAN'S HOLIDAY**



SEARCH FOR: Fernando Alonso - last to first in three laps at Daytona Sandown Park
 What do F1 champs do on their days off? Go racing, of course! Here Fernando Alonso stamps his authority in a DMAX kart thrash at Daytona Sandown Park. Also check out the follow-up video to see where he ranks on the track's superstar leaderboard.

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Shock Formula 1 podium finishes

The second and third places that made everyone go, 'What?!' **EDD STRAW** selects his pick

The shock victories in Formula 1 history are well-known. But as well as those surprises provided by drivers such as Giancarlo Baghetti, Vittorio

Brambilla, Olivier Panis and Pastor Maldonado, there are many more unexpected second- and third-place finishes that are too often forgotten by teams and drivers.

For the purposes of this list, only those on the second and third rung of the podium are considered. The driver's reputation and experience and the level of competitiveness of

the team are taken into account, but what all 10 choices have in common is that for many reasons they weren't expected to have finished in the top three.



1 John Love
1967 South African GP – 2nd
 A star of the South African racing scene, Love's self-entered Cooper Climax T79 was an outsider at Kyalami. But in the closing stages he led an attritional race. A fuel-pump problem forced him to pit because of fears of running out of fuel, relegating him to second.



2 Jacques Laffite
1975 German GP – 2nd
 This was the first time a car bearing the Williams name scored a point. Driving for Frank Williams Racing Cars, Laffite took a shock second behind the Brabham of Carlos Reutemann after starting 15th on the grid. It was the team's only points finish of 1975.

4 Ivan Capelli
1990 French GP – 2nd
 One of the stars of last week's 1990 special issue, Capelli's Leyton House team had failed to qualify for the previous race in Mexico and hadn't scored a point since the previous year's season opener. Only a fuel-pressure problem cost him victory.



3 Paul Frere
1956 Belgian GP – 2nd
 Journalist Paul Frere was a true amateur racer who initially planned only to try the Lancia D50 during practice. After enjoying his first taste of the car, he was persuaded to participate in the race, qualifying eighth and finishing second behind Peter Collins.

5 Tiago Monteiro
2005 United States GP – 3rd
 The Portuguese was in the second-slowest car, which became the second-quickest when the Michelin runners pulled out at the end of the warm-up lap. Well behind the leading Ferraris, he beat Jordan team-mate Narain Karthikeyan to third.



6 JJ Lehto
1991 San Marino GP – 3rd
 The Finn had never scored a point, and Scuderia Italia had drawn a blank in the previous 28 races. But Lehto became the last driver to come through pre-qualifying to finish on the podium at Imola in his Dallara-Judd, behind Ayrton Senna and Gerhard Berger.



7 Damon Hill
1997 Hungarian GP – 2nd
 Hill was the reigning world champion, but his move to Arrows had been a disaster. Thanks to the performance of Bridgestone's rubber, he led much of the Hungarian GP before dropping back with a hydraulic problem, finishing second.



8 Stefan Johansson
1989 Portuguese GP – 3rd
 It wasn't unusual to see Johansson on an F1 podium, but it was when he did it for the tiny Onyx team. Mike Earle's squad was new to F1 and had failed to qualify often during '89, but Johansson made it through pre-qualifying to start 12th and finish in third.



9 Mark Donohue
1971 Canadian GP – 3rd
 In a rain-sodden race, the first in world championship history to be red-flagged, Donohue finished behind only Jackie Stewart and Ronnie Peterson driving a Roger Penske-run McLaren M19A. It was the American's debut, and stood as his best result.



10 Nelson Piquet Jr
2008 German GP – 2nd
 The Renault driver started 17th and was nowhere early on, but a combination of a one-stop strategy and Timo Glock's well-timed crash meant the Brazilian took the lead on lap 54 of 67. He couldn't quite hold off Lewis Hamilton, but held second.

NEXT WEEK F1 is back: Belgian GP
 Plus: BTCC Knockhill and IndyCar Pocono



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DUNBAR/LAT

PURSUING A CAREER IN RACING

requires discipline away from the track, regardless of what happens on it. That's a fact I've been made all too aware of over the last three months.

If you read May's issue of AUTOSPORT Performance, you'll know that I, along with MSA Formula racer Sennan Fielding and 2013 British GT champion Andrew Howard, became guinea pigs as we undertook tailored fitness programmes from Prodrive with some simulator work on the side.

I made my Le Mans 24 Hours debut in the time between these issues (OK, in the karting version), while Sennan became a race winner in MSA Formula and Andrew helped his Beechdean BGT team to three pole positions and a race win at Spa.

That can't all be coincidence, can it? Surely not, so we've used a selection of exercises and nutritional guidelines to pass on some of what we learned.

Whether you're an aspiring professional or hobby racer in the UK, or looking to start out, this issue of Performance should have something for you – and it's all in the name of giving you the edge.

SCOTT MITCHELL PERFORMANCE EDITOR

scott.mitchell@haymarket.com

@ScottMitchell89



IN THE ISSUE

4 DRIVING TECHNIQUE Mastering the tyres

World-renowned driver coach and ex-racer Rob Wilson explains the skill behind getting the most from your tyres and making them last

7 DRIVER'S EYE VIEW Andy Priaulx

The three-time World Touring Car champion-turned-GT ace and BTCC race winner explains how he prepared for world domination



8 FIT FOR MOTORSPORT The AUTOSPORT Performance challenge

Three months ago we set three drivers – including our editor – on a tailored professional programme. Here we have the results, and a few tips as well

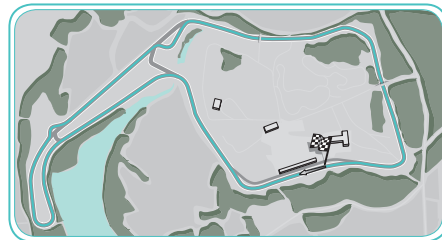
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With frontal head restraints becoming mandatory for most series in the UK from 2016, we put the popular HANS device under the microscope



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25 TYRE TALK Five tips to help maximise your rubber

With help from Yokohama, learn five key things about tyres, from storage to scrubbing them in

26 GETTING STARTED How to become a racing driver

AUTOSPORT Performance is not restricted to those already in racing. Chairman of the Association of Racing Drivers School Pat Blakeney talks you through how to take the first step to becoming a driver: the ARDS test



ROB WILSON'S MASTERCLASS

THE ACE DRIVER COACH EXPLAINS THE SCIENCE BEHIND TYRE MANAGEMENT AND EXPLODES A FEW MYTHS

The first thing is to understand that the tyre is the only contact with the ground. So the tyre is critical – it's all-defining – and they will need temperature. There will be a point when the temperature is at its optimum. It will always be pretty scary on cold tyres when you leave the pitlane – a bit like driving on ice – unless you've had tyre warmers on, but most don't. Obviously zig-zagging is a universal part of what people do. It does put a bit of temperature into the tyres, but not anything like what people think it does. If you can slightly hang back on some of the longer corners on a warm-up lap, like Paddock at Brands or through Clearways, and get a little bit of heat build-up through the longer corners, that will help more than zig-zagging. Using the brakes helps put a little more heat in the tyres too – it goes through the discs, through the wheels and puts some carcass temperature into the rubber.

Don't kid yourself with zig-zagging. Its value is limited and it never happened at all until 1971. The first time people saw anyone doing it was at the end of the warm-up lap for the French Grand Prix when Jackie Stewart did it – people thought he was warming up his tyres but it was just to make sure there was no gravel or small stones on his tyres. It caught on.

There will be some temperature but, by and large, when you take off on the warm-up lap try to get a bit of wheelspin in there, generate it through longer corners and through the brakes. You should apply little stabs on the throttle to find out what your parameters are in terms of required car control. It's critical to do that, to give yourself confidence and speed into the corner.

These days companies are encouraged to build the worst tyres they can rather than the best! There's a little more tyre management required. They want degradation, they insist on one brand of tyre and want to spice up the racing. You don't want to rag the tyres – even if the tyres are made out of concrete, doing that will be slower. Good tyre management should be integral to a driver's fundamental ability.

If you are relying on car control or you're an animal with the tyres – and that will come down to your inputs – you'll not get the maximum out of your driving or your car. Once you get into the race you need to make sure

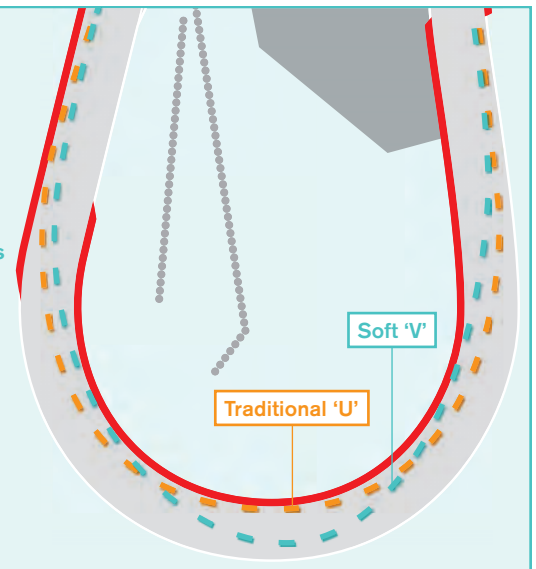


UV CASE STUDY LUFFIELD

Luffield at Silverstone is one of the best examples of a corner having different lines, as exhibited by the two Williams Formula 1 drivers during the recent British Grand Prix.

As a driver approaches the corner and begins the turn, they can decide whether or not to apply one or two degrees more lock onto the steering. This will cut across the traditional apex and take the car deeper into the corner (creating the 'V'), and also allow for a more aggressive cutback that straightens the exit.

This enables a more significant application of the throttle than the patient approach required with a 'U' line. It sacrifices mid-corner speed for a higher exit, making it more beneficial when followed by a longer straight.



you're not looking for high minimum speed in the middle of fast corners that go on too long because the tyres will degrade. You'll be looking for the least amount of time spent cornering to minimise the duration you've got high load in your tyres.

Always look to get steering out of the car as you're exiting the corner. It's a good way of managing the tyres. You'll also want to reduce any time spent with wheelspin – it's not only time-consuming but it wears out your tyres. Basically it's all just common sense. The rate you tell a tyre what's coming will have a huge effect on how well it lasts. If your initial input is too big then you can go past the tyre's grip, create a bit of push, wait for the front to bite and can get a bit of oversteer. If you tell it in a silky way it'll be a more obedient tyre and will follow its nose. I'm not saying don't turn the wheel, but it's *how* you turn it.

Tyre management equals weight management. The result of that is well-managed tyres. Sometimes tyre management is described as "just go slow". What does that mean? People need to be shown how tyres can last longer by managing their driving.

When we talk about tyre management we're talking about driver management. Look for an early weight transfer to create a rotation so you can get some steering out of it and also have more weight on the inside rear wheel to reduce the wheelspin. You can call it tyre management, but it's actually driver management and weight management. It all comes down to the individual.

Does a driver have a feel for the surface or are they just joining up geometric dots – turning point, apex, exit point and going as fast as they can around it? Or does that extra load on the outside offend them? It can



be really difficult to talk a driver out of going flat-out round a corner because they will be saying, 'I can keep my foot hard down here, if I'm full throttle and staying on the track' and that's fairly normal. Well that extra load, those extra kilos, equal a form of tyre scrub. Which slows down acceleration and degrades the tyre a bit more. It's not necessarily the best thing to do.

There are of course times you have to be on the limit, looking for a maximum. But it's where you place your values – high minimum speed or direction change? You'll get better tyre wear and a faster lap time if you master it, but it's a difficult thing to talk people out of. The aim is to go fast round the corner on the limit, so it can take a while to replace those values.

If you sit on a drift too long the car gets slower because tyres are wider these days and it wears them. Then the tyres are gone after 12 laps. Is it a hard thing to learn? Yes, but I've spent my life dealing with it, and once a driver gets it they truly get it. ■

GP2 places high demands on tyre management



TYRE MANAGEMENT THE MOTORCYCLE-SIDECAR THEORY

In this example the sidecar passenger helps expediate smooth steering input

1 START LEANING

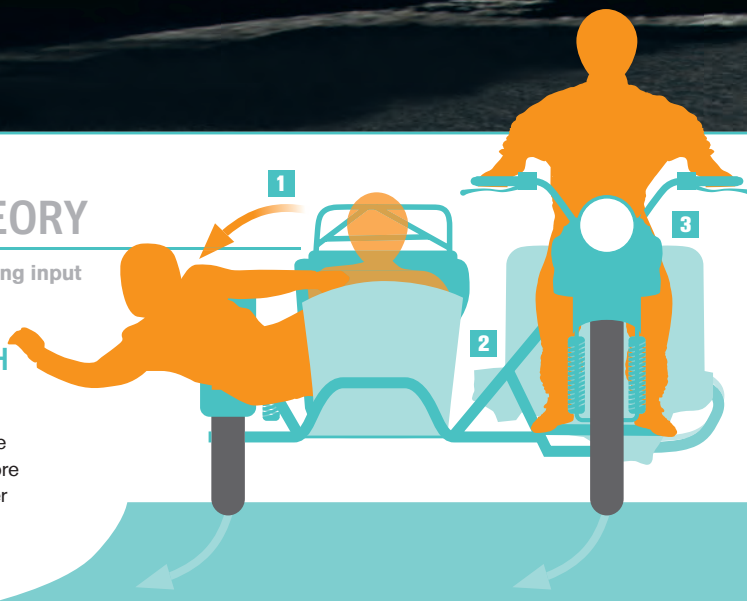
Approaching a corner the passenger will lean towards it. That's the beginning of a weight transfer, akin to a driver's initial steering input.

2 WARN THE FRONT TYRE

Without that weight transfer in the initial phase the front tyre wouldn't be warned to the same degree, the passenger would be tilted in the other direction and it becomes harder to get the front to turn in.

3 KEEP IT SMOOTH

By transferring the weight properly the rider can brake more efficiently and steer more positively, knowing the bike will follow its nose.



S. BLOKHAW/LAT



DON'T BE THE WEAK LINK!

When huge sums of money are spent on the engineering of your car to shave lap-times by fractions of seconds, it is vital that the driver is also performing at their optimum level.

When a driver is physically and mentally fitter, they maintain higher levels of concentration, experience less fatigue and benefit from faster recovery times.

At Prodrive we have been running driver performance programmes for over a decade for some of the world's top race and rally drivers. Each programme is tailored to the specific needs of the driver, and crucially the physical and mental demands put on them during an event.

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ANDY PRIAULX INSIDE LINE

THE TRIPLE WORLD TOURING CAR CHAMPION REVEALS HOW THE HARD WORK IS DONE OUTSIDE THE CAR

CAREER HIGHLIGHTS



- 2015** 7th in BTCC, 1 win, 5th in ELMS
- 2014** 8th in GTLM class in United SportsCars
- 2013** 20th in DTM
- 2012** 13th in DTM
- 2011** Switches to sportscars, winning class at Sebring 12 Hours
- 2008** 4th each year in WTCC (9 wins), selected sportscar outings
- 2010**
- 2007** WTCC champion, 3 wins
- 2006** WTCC champion, 5 wins
- 2005** WTCC champion, 1 win
- 2004** ETCC champion, 5 wins
- 2003** 3rd in ETCC (3 wins) after signing for BMW
- 2002** 5th in BTCC for Honda (1 win)
- 2001** 6th in British F3 (2 wins), takes pole on one-off BTCC outing for Vauxhall
- 2000** 9th in British F3
- 1999** Renault Spider UK champion, 13 wins out of 13
- 1998** Part season in Renault Spider Cup, 2nd in Formula Palmer Audi Winter Series
- 1997** Selected British F3 outings
- 1996** Car-racing debut in Formula Renault UK
- 1991** Hillclimbing, culminating in winning the 1995 British title
- 1995**
- 1986** Races in karting and motocross
- 1990**

Being a racing driver is a full-time job; you have to live it every day. You can't drop it and pick it up again; you have to stay in that mental state of pure intensity and awareness. It requires practice because the brain is a muscle and needs training. This is why mental preparation is essential for a driver.

It's very dangerous to leave all of your work until you are in the car. If you become too analytical, you don't drive naturally. So the objective is to understand what the car or situation demands and do all of your analysis and judgement ahead of time.

You need to drive freely and naturally. That's an extremely difficult mode to switch in and out of, because motorsport is a very judgemental world and every aspect of your performance is measured. But you have to find a way to do it. It's all about calming what's called the 'monkey mind', that inner voice that is trying to judge you and knock you off centre. You need to tame it before you get in the car.

“Because the subconscious mind works far more quickly than the conscious mind, if you are thinking you are not driving at your best”

There is no secret to how to achieve this because every driver needs something different. I've used visualisation and meditation, which helps you to be able to deal with the high-pressure moments when your back is against the wall. That last one per cent mentally is what turns a strength into a super-strength.

To be quick, you need to drive with 100 per cent aggression and 100 per cent restraint. Rely purely on your emotional mind and you will only be aggressive. It's mental preparation that gives you the discipline and understanding to add the restraint that all great drivers need. If you think about what is going wrong

when you are driving, you move out of the instinctive flow. Because the subconscious mind works far more quickly than the conscious mind, if you are thinking you are not driving at your best. The best drivers go from strength to strength by being able to disconnect the analytical mind while driving.

When you make a mistake, you must not judge yourself. This is where calming the inner chatter is so important. What I do when I miss an apex or run wide is make myself immediately switch to the future with my thoughts and think 'next apex'. Through sheer concentration and determination, I am able to reset. But the big question is, what is concentration? What is determination? You need to know that.

Meditation is about creating that awareness. I know what concentration is, and I can ignite it and motivation, and switch my nervous system on to perform. When you are younger, you flit in and out of that zone.

Everybody has a different switch. Understanding it is the key, and you might need assistance from a professional to do that.

Visualisation is also the practice of concentration and it is very difficult. You can find all of these other thoughts creeping in. When you achieve that concentration, though, you can use visualisation to improve and practice. I use visualisation for circuits I've not been to for a while, so that when you first leave the pits it's like you've already done 1000 laps.

You can also use meditation for problem-solving. I use the Silva method, which is really helpful. Combined with visualisation, you can tackle challenges in the car. You can tap into the more creative, unconscious part of the mind to the point where I've solved problems and turned around my season.

These techniques don't have to be used while sitting on a bean bag surrounded by candles. As a driver you often have to travel long distances, and that's where meditation and practice assist you. You can do it sitting on a plane, just by defocusing your eyes to tap into that creative subconscious. You can also use this technique to assist with switching between cars, as I do between GT and touring cars.

None of this is easy. You have to invest time and effort. But by understanding what works for you, by focusing on turning your weaknesses into strengths, and strengths into super-strengths, you can make the difference between being a good driver and one of those who, when it really matters, can always deliver. ■

THE AUTOSPORT PERFORMANCE CHALLENGE

HUMAN PERFORMANCE UNDERPINS CAR PERFORMANCE. WE LOOK AT THE BASICS OF PROFESSIONAL DRIVER PREPARATION

Three months ago AUTOSPORT Performance began the process of putting three subjects through the rigours of professional driver preparation.

After a day of assessment at Base Performance Simulators, MSA Formula race winner Sennan Fielding, former British GT champion Andrew Howard and AUTOSPORT Performance editor Scott Mitchell were provided with personalised

fitness and nutrition programmes.

The three drivers exhibited wide-ranging fitness levels – more on that on page 12 – and thus had programmes that had different focuses and intensities. There are different strains on a driver's body if he is racing a single-seater compared to a GT car, for example, and training programmes need to reflect this.

Prodrive's Driver Performance expert John Camilleri provides a sample set of exercises here. ■

RESISTANCE TRAINING

The objective with weight training is to stimulate muscle development. Here are four useful exercises – though an optimal course would have to be individually tailored.

KETTLEBELL LUNGE

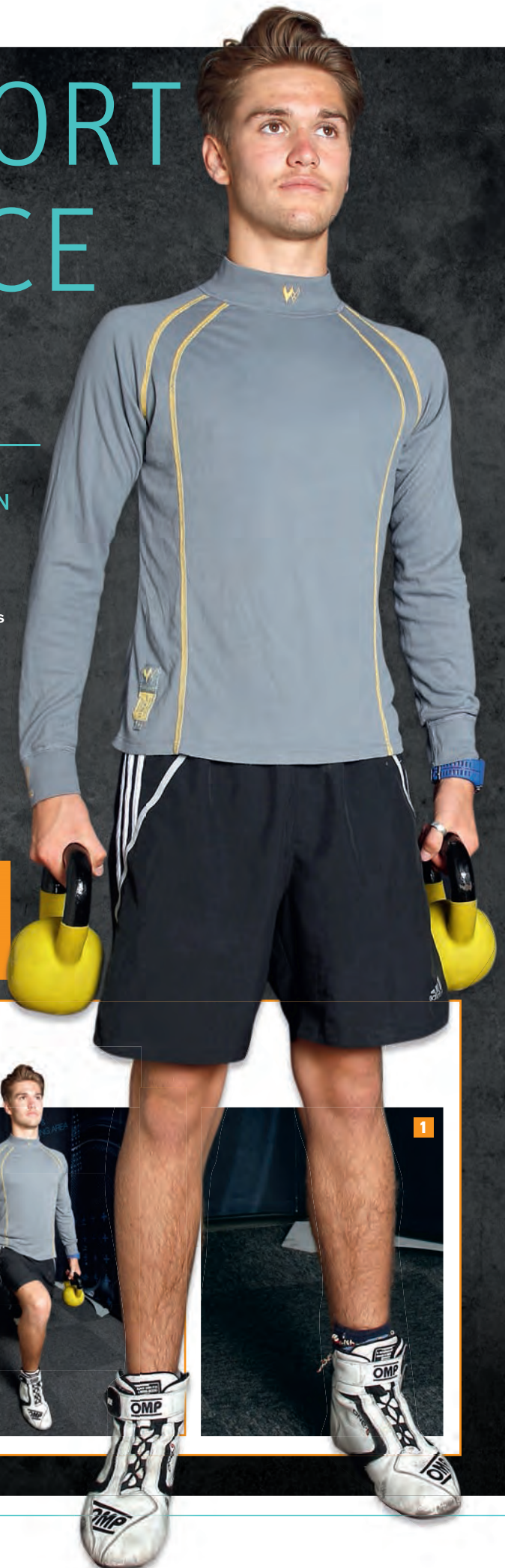
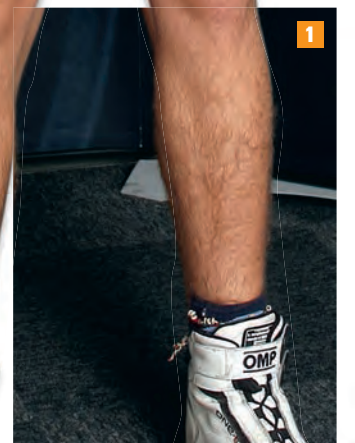
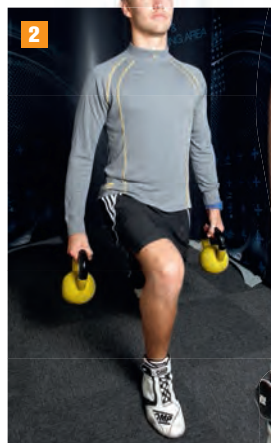
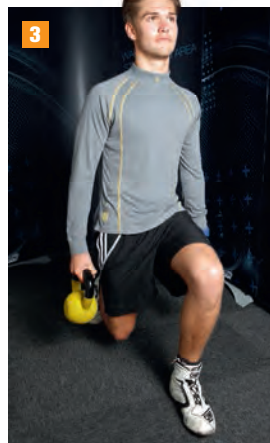
TARGET Glutes **WHAT YOU NEED** Kettlebell or dumbbell

EXECUTION

Begin by standing with your feet hip-width apart, holding kettlebells (or dumbbells) by your sides. Take a big stride forwards with your right foot and bend the right knee to 90°. Ensure that your hips stay square, your torso remains upright and your right knee remains in line with your middle toe through all phases of the movement. Push back to the start position and then repeat with your left leg.

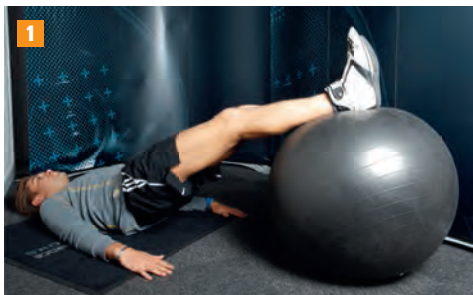
WHAT DOES THIS DO?

This exercise helps develop gluteal strength. These muscles are involved in the braking action and the transfer between pedals for racing drivers that right-foot brake.



STABILITY LEG CURL

TARGET Hamstrings **WHAT YOU NEED** Stability ball



EXECUTION

Begin by lying on your back with your arms out for support and your feet on top of the stability ball. Engage your core muscles and lift your hips up off the ground. Bend your knees and roll the ball in towards your torso and then slowly return to the starting position.

WHAT DOES THIS DO?

This exercise develops hamstring strength, which in turn helps maintain hip stability and reduces the likelihood of experiencing referred lower back pain (that is, pain from other organs felt in the back). Static stretching for the hamstrings is also important for optimal functional movement.



PLANK

TARGET Core **WHAT YOU NEED** Space

EXECUTION

Position yourself supported on toes and forearms. Raise your hips, keeping a straight line from your shoulders to ankles. Use your abdominal muscles to maintain this for as long as you safely can. You should not feel this in your lower back. If you do then have your feet a little wider or lift your hips slightly.

WHAT DOES THIS DO?

The plank is a static hold that works the transverse abdominis muscle, which is a deep-lying core muscle that helps provide trunk stability. Racing drivers are reliant on their core strength for tolerating lateral g-forces and g-force under braking.

FARTLEK TRAINING

TARGET Cardiovascular

WHAT YOU NEED Open space, a treadmill, cross trainer or rowing machine

EXECUTION

This type of CV training encourages the heart and lungs to adapt to different physical intensities and can be manipulated to mirror the physical output drivers experience when racing. Similarly, high-intensity interval training – comprising up to 10 'sprints' – are a good addition to a cardio programme. This works on a 2:1 ratio (that's 60 seconds sprinting, 30 seconds resting).

WHAT DOES THIS DO?

It is particularly beneficial for raising lactate threshold and improving oxygen utilisation at a high physical output. This is particularly appropriate for single-seater, sprint racing.

The important thing to note is your cardio programme should be tailored to your requirements, which makes a physical assessment important.



TRX ROW

TARGET Shoulders/back **WHAT YOU NEED** TRX (and somewhere to mount it)

EXECUTION

Begin by having your feet hip-width apart, and holding the TRX handles at arm's length in front of you. Squat to 90° at the knees, ensuring the knees stay in line with your middle toes through all phases of the movement.

As you drive upwards through your heels, pull with your arms at the same time, bringing your elbows in

close to your body and squeezing your shoulder blades together.

WHAT DOES THIS DO?

This exercise focuses on shoulder retraction, which helps to counteract the rounded postural position of a race seat.

NUTRITIONAL INFO

A good training programme is compromised without a nutritional equivalent. Fortunately, John Camilleri has a few tips up his sleeve

SNACKS

- Fruits, especially apples, grapes, strawberries or blueberries
- Handful of sunflower seeds, or unsalted cashew nuts and sultanas
- Dried apricots, almonds and walnuts
- Fruit loaf, eg Soreen
- Rice cakes with marmite or unsalted peanut butter
- Low-fat yoghurt

LUNCHTIME MEALS

- Grilled chicken, avocado and tomato with cous-cous
- Tuna and sweet corn with light mayonnaise on jacket potato
- Smoked salmon, low-fat cream cheese and rocket in pitta
- **Salad box including a varied selection of:** Rocket, kale, iceberg lettuce, spinach, mozzarella, feta, smoked salmon, grilled chicken, tuna, prawns, smoked mackerel, hummus, avocado, red/yellow/green peppers, tomatoes, carrots, sweetcorn, asparagus, pine nuts, walnuts and apple.
- **Dressings (in moderation) might include:** Olive oil and balsamic vinegar, French dressing (no added sugar) or yoghurt and mint.

EVENING MEALS

- Brown pasta with grilled chicken, pesto and pine nuts
- Chicken and broccoli bake
- Tuna steak and salad/vegetables
- Prawn stir-fry with brown rice



DINNER RECIPE:

Chicken or tuna, spinach and small pasta shell salad

DIRECTIONS



Roast chicken for 30 minutes or until brown



Bring a large pot of lightly salted water to the boil.



Add pasta and cook for 8 to 10 minutes or until al dente; drain and rinse with cold water.



Chop chicken, transfer to a large bowl and stir in spinach, feta, pine nuts, basil and white pepper. Toss with olive oil and balsamic vinegar.



Leave to cool completely before refrigerating, and serve cold.



INGREDIENTS

- 16 oz Package uncooked small shell pasta
- 4 Chicken breasts
- 1 Package baby spinach leaves, (10oz) finely chopped
- 1/2 lb Crumbled feta cheese
- 3/4 cup Pine nuts
- 1/2 tbsp Dried basil or parsley
- 1/4 tbsp Ground white pepper
- 1/2 cup Olive oil
- 1/2 cup Balsamic vinegar

DINNER RECIPE:

Chicken or prawn stir-fry with brown rice

DIRECTIONS



Chop chicken into bite-sized pieces. Place in a bowl and toss with ginger and garlic; set aside.



Heat a large frying pan or wok over high heat. Add oil.



Add vegetables and cook for 3 mins, until heated through. Add broth, cover veggies and cook for one minute. Add chicken, marinade and soy sauce. Toss until well coated. Cook for about 2 minutes, or until chicken is thoroughly cooked through.



Serve half the stir-fry with a half-cup of brown rice.

INGREDIENTS

- 6 oz Natural chicken breast or handful of fresh prawns - shelled
- 1 tbsp Fresh organic ginger, grated
- 1 Clove garlic, minced
- 1 tbsp Extra-virgin olive oil
- 1/4 cup Water chestnuts, sliced
- 1 Carrot, sliced
- 1/2 cup Broccoli, cut into florets
- 1/4 cup Snow peas
- 1/2 cup Bok choy (cut into 1-inch pieces)
- 1/2 cup Chicken or vegetable broth
- 1 tbsp Low-sodium organic soy sauce
- 1 cup Brown rice, cooked



WHAT YOU NEED TO KNOW ABOUT YOUR INTAKE

Ideally, along with vitamins and minerals, your choices of the major food groups should contribute to your daily calorie intake via carbohydrates, proteins and fat for your diet to be truly "balanced"

PROTEIN

Proteins are required for growth and repair of the body. Excess protein can also be stored as glucose and used for energy, although protein is not a primary energy store.

Currently there is no specific upper limit as to how much protein is too much. Your body is likely to need extra protein to aid recovery after your long working days followed by your running sessions. Aim for 2g of protein per kg of bodyweight each day.

CARBOHYDRATES

Carbs are broken down to provide the body with energy. Examples of good quality carbs are brown bread, brown pasta and brown rice, and fruits and vegetables. However, if your carbohydrate intake greatly exceeds your actual energy expenditure then it is possible that your body's carbohydrate stores can be converted to fat. With this in mind, where possible perhaps try to eat your carbs at lunchtime for energy throughout the day.

FAT

Fat is important within the body since it helps protect your vital organs; it also helps keep us warm, and it's involved in the transport of certain vitamins and minerals. Fats should make up approximately 10 per cent of our diet and good sources include oily fish like fresh tuna or mackerel, vegetable oils and low-fat spreads. The types of fat to avoid are saturated fats, and excessive amounts can increase your risk of coronary heart disease.

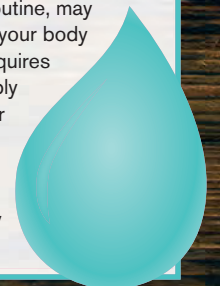
VITAMINS AND MINERALS

For active people green vegetables that are high in antioxidants are very important to include as part of your diet.

They are rich in vitamin A, which is not produced naturally within the body. Eating a little more fruit when your body is craving something sweet would benefit you by boosting your immune system, increasing your energy levels and improving your quality of sleep.

WATER

Government guidelines suggest that we should all try to drink a minimum of two litres of water each day. However, the demands of a long working day, combined with your exercise routine, may mean that your body actually requires considerably more water than this in order to stay adequately hydrated.





FITNESS RESULTS

After a three-month programme, we compare our test subjects' then and now, using WEC racer Fernando Rees as a benchmark

All three test subjects showed improvements over three months, although many benefits are less open to objective measurement – such as core strength, and improved flexibility and posture, which can reduce the risk of injury.



■ Excellent ■ Average
■ Good ■ Poor

	SENNAN FIELDING		ANDREW HOWARD		SCOTT MITCHELL		FERNANDO REES
WEIGHT kg	67.7	66.5	102.8	99.1	95.8	85.6	59
RESTING HEART RATE bpm	66	51	58	60	72	59	48
BLOOD PRESSURE systolic/diastolic (mm Hg)	104/74	106/70	127/88	123/78	120/78	116/74	110/70
FORCED VITAL CAPACITY l/min	5.18	4.83	4.61	-	4.97	5.17	4.38
LUNG EFFICIENCY forced expiratory volume	4.61	4.58	2.82	-	4.39	4.64	3.88
PEAK FLOW RATE l/min	573	573	558	-	463	711	474
BODY FAT percentage	11.6	10	27.1	24.9	25.1	19.7	9.8
HYDRATION percentage	53.6	51.7	53	52.9	37	50	52
SIDE PLANK TEST both sides (seconds)	210	310	135	153	94	188	286
GRIP STRENGTH kg	44.8	40.1	55	-	38.9	41.8	37.7
STRAIGHT LEG RAISE degrees	78	89	100	103	73	92	88
AEROBIC CAPACITY ml/kg/min	73.59	73.32	35.27	36	48.38	56.73	66.20
TOTAL CHOLESTEROL mmol/l	4.09	3.9	6.1	6.8	3.0	2.6	4.04

SIMULATOR

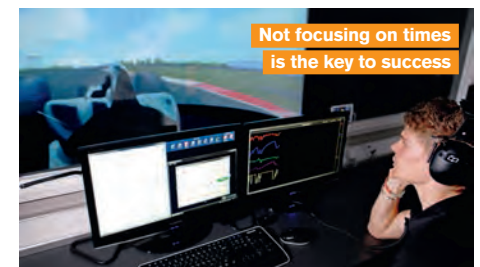
With Andrew Howard enjoying the benefits of a Base Performance-installed simulator in his own home, Scott Mitchell and Sennan Fielding returned to Base for more tuition. Engineer MATT GEORGE reports

After the first simulator session in May, everyone left with slightly different targets to achieve when they returned. Scott needed to focus on his braking technique, as an improvement in that would ultimately be the biggest gain in lap time. Sennan, however, did not have a specific area he wanted to work in – it was more about finding a happy medium between his current techniques. Sometimes there is a need to sacrifice corner entry to gain on the exit.

Both aspects are easily shown in the simulator. We use the live data screen to provide feedback in real time to the driver to speed up the learning process. By not obsessing with laptime, you can focus on a specific area that has to be improved and work forward: when the skill is perfected, the laptime will naturally follow.

Each run started with a short briefing and a look at the data from the previous session, and we also discussed how the car will behave differently with a change of driving style. This is important, because it's your first clue for what needs to be improved and what you can expect before you get in the car.

To achieve what you are looking for, first you need a proper understanding on why you would need to change the technique, and how that will affect what you are going to feel as a driver. We don't want people expecting to just rely on someone to tell you whether what you've done was better or worse. Understanding of basic dynamics is an important





“By being technically good and confident in how you are achieving any laptime, it becomes easier to achieve mentally and physically” Matt George



part of the skillset gained by using a simulator, and critical to retaining and applying it out in the real world.

By being technically good and confident in how you are achieving any laptime, it becomes easier to achieve mentally and physically. Sometimes this involves going through a process where the laptime in the simulator will actually slow slightly before getting faster again, but understanding how and why things work will make you a more consistent and adaptable driver on circuit.

Scott's initial data trace was very square because he was hopping off the brakes quite early. This will induce understeer into the car, so we spent the first practice run – 10 laps – driving to achieve a better brake shape in the data. This centred around providing feedback after most corners on how the technique was improving.

After the session, happy we had made good progress, we sat back in the engineering room and analysed the differences in efficiency between a good brake shape and a bad one, talking through what to do when the technique is good and what could then be done to further maximise what he had learnt.

Getting back in the car for a slightly shorter run of six laps, Scott spent the first few laps with feedback on whether he was maximising the technique or not. When left to his own devices to apply this in pursuit of a laptime on the final two runs, Scott was immediately two seconds quicker and wound up 1.2s slower than Sennan, compared with over four seconds in May.

For Sennan, with a more generic target in place, the



process was different. An issue highlighted from the previous session was between his two fastest laps, where on some corners he was carrying too much entry speed, considerably compromising his exit – and vice versa on different corners. Establishing what style is needed for each corner was crucial to make a consistent gain throughout the lap. Once again, we started with 10 laps, with constant feedback on how to improve what we were seeing on track and on the data.

After a short break, we left Sennan to his own devices after only two laps to run for a further four, and he improved his laptime, taking a full second off what was already a quick personal best.

We can use more than the conventional data parameters. The physical data system we run on the simulator is used to monitor vital signs while driving, and although driving the simulator isn't 100 per cent comparable with real life it is particularly useful to compare how different people handle pressure. We can see drivers tense up. Their

intakes of breath are shorter and sharper, usually meaning a slower laptime or mistakes. Scott's qualifying run in May was severely compromised by this, and when he returned to the track for a three-lap run this time he went faster, getting down to a 2m01.9s (half a second behind Sennan).


The system is also useful for targeting a problem area in driving. If there is a part of the track that someone is struggling with more than another, usually we see that in this area they are not as physically relaxed. This was very obvious in Scott's simulator session. On approach to the final complex on the Silverstone Grand Prix circuit, we could see through the physical data that Scott was struggling and not feeling as confident in letting the car do the work for him as he was with the rest of the track.

We informed him over the radio that he had done that section really well on a specific lap, and as a result he became significantly calmer and more relaxed. As his driving became smoother and more consistent, his laptimes improved significantly. ■

PROGRESS.

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Mike Wilds - 50 years in Racing World Champion and 12 x British Champion

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Mike Simpson
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UNDER THE MICROSCOPE THE HANS DEVICE

AS FRONTAL HEAD RESTRAINTS BECOME MORE PREVALENT IN THE UK, WE PROFILE SCHROTH'S PRODUCT

For a device lauded by many in motorsport as a crucial part of a driver's kit, that the FIA has only approved three manufacturers and two types of devices goes some way to highlighting the complexities of a frontal head restraint.

The Head And Neck System Safety devices – the abbreviation of which, HANS, has become common parlance for the apparatus – and the Hybrid series are the only FIA-approved FHR (Frontal Head Restraint) offerings. That suggests significant exclusivity, and for a long time to buy a HANS device was an expensive luxury. Small wonder club racers in Britain, for example, were concerned over the hit their wallets would take when the Motor Sports Association announced the use of FHRs would become mandatory for single-seater racers this year, and for all circuit racers from January 1, 2016.

But the cost has decreased significantly as the products become more commonplace in motorsport. That, combined with new production methods and cost-effective materials, means a four-figure price is not the only option. German company SCHROTH, which produces the HANS device, has three different products available to the UK market: the XLT (an extra-lightweight carbonfibre offering); the Pro (a light alternative) and the Super Sport (entry-level).

The MSA's advice is that a driver gets the best equipment they can afford, and as anyone who has been to Daytona's various arrive-and-drive karting facilities will remember, it's like ex-Formula 1 driver Martin Brundle says: "If you've got a five-dollar head, get a five-dollar helmet". That usually races a laugh or



HANS devices are mandatory in F1

STALEY/LAT

two in the safety briefing, but the message rings true and it's a price you can't argue paying, as 2013 British Touring Car champion Andrew Jordan attests.

"I've never known any different but it would feel weird if I got in the car without it," he says. "I know some people go racing and pay for it with their wages, but for goodness' sake – it's proven it can save your life! Sometimes there is a bit of bravado from drivers but I'd rather put it on and know if I have a huge shunt there's a good chance I won't seriously hurt myself."

Given the HANS device, in its earliest form, has been around since the early 1980s, making it mandatory in the UK now may seem odd. If anything, Britain is playing catch-up. But ultimately it's the result

"It would feel weird if I got in the car without it. For goodness' sake, it's proven it can save your life!" Andrew Jordan

of intensive (and ongoing) research by the FIA and the various national governing bodies of motorsport to improve safety.

Andy Mellor has played a key role in the FIA Institute's work into the role frontal head restraints play in motorsport, and highlights Felipe Massa's 2004 crash in the Canadian Grand Prix. The Brazilian hit the tyres at 110km/h at the hairpin, an accident Mellor credits as "probably the first where HANS made a difference and potentially saved a driver's life".

The HANS had been introduced to Formula 1 the previous season, and avoiding grave consequences is its *raison d'être*. It has to be, especially when you understand what a basal-skull fracture is, how easy it can happen – and what occurs if you suffer one.

SCHROTH estimate 50 per cent of racing deaths are directly attributable to basal skull fractures, exactly what the HANS device is designed to avoid.

The device has become a must-have within the UK racing scene in recent times with many more series making its use mandatory. This has been the case internationally for some time, with Britain now fortunately following suit. ■



WHAT HAPPENS IN A CRASH?

When a car comes to an abrupt halt, a driver's body continues at speed via inertia – the webbing straps on the harness and on the HANS device's tether take up the slack and stretch a little when under load, bringing the driver to a similarly abrupt halt. The key thing here is the driver as a whole stops abruptly, not just his or her middle section.



WITH HANS



JUST BELTS



FRONTAL HEAD RESTRAINT FAQ



The HANS tether system is "set for optimal performance" at 180mm, but can be adjusted by 20mm either way without reducing the performance. Tethers should be changed after a heavy crash.



A simulation of a 31mph 90-degree head-on collision with a 75kg dummy suggests a maximum deceleration of 30g. FHRs are designed to protect drivers from basal-skull fractures in the event of such a crash.

Can anything be inserted between the shoulder straps and the FHR?

Not unless specified by the FHR manufacturer. The HANS device is designed to maintain a good level of friction to minimise slippage between the straps and the HANS device.

How tightly should I wear my harness when using an FHR?

Whether using an FHR or not, any harness must be worn as tightly as possible. Fully tighten the lapstrap, then the shoulder straps. If you are using a five- or six-point harness, ensure crotch straps are tight when the lap strap is tight.

Can I use an FHR without a harness?

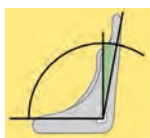
A HANS requires the minimum of a four-point harness to be used. The Simpson Hybrid device does not require use of a harness but unless the body is restrained there is no advantage in controlling the movement of the head relative to the body.

Can I use an FHR with any helmet?

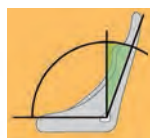
The helmet must be equipped by the helmet manufacturer or agent with FIA homologated fixation points and the helmet must be manufactured in accordance with one of the required Standards. Some helmets are specifically manufactured and homologated for use with HANS.

Which device should I use?

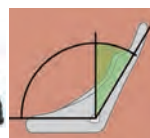
The simple rule of thumb is: 10 degrees – extreme upright (Rally and Sprint car type of applications). 20 degrees – upright (GT and Sports cars with racing shell seats). 30 degrees – semi reclined (single-seater formula cars and sports-prototypes). 40 degrees – extreme reclined (extreme Formula cars and sports-prototypes). It's not one-size-fits-all. It's crucial you wear the correct size of HANS device. Comfort is the deciding factor here and size is determined depending on your seat, seating position and the build of your body. A large HANS may be more comfortable than a medium and a different angle may give you more headroom in your seating position. You may need to try two or three different options in your car, in your seat with helmet and harness on to see which HANS offers you the most comfort.



10° To be used in cars with an upright seating position.



20° For use in saloon or GT applications.



30° For use in single-seater/sports-prototype applications with moderate seat recline
40° Formula 1 version for extreme seat recline.



OULTON PARK WITH ALEXANDER SIMS

THE BRITISH GT ACE REVEALS THE SECRETS TO ONE OF BRITAIN'S TOUGHEST TRACKS, DRIVING HIS BMW Z4 GTE



1 OLD HALL TURN 1

150mph
5th gear
CORNER BOARD
Paddock
PIT EXIT
SERVICE ROAD
MARSHAL POST
85mph

Because the straight is curved, you start the lap in the middle of the circuit and then move back across to the left before the braking zone. That is quite bumpy, and you brake just after a big bump and start turning in after that. There's quite a lot of camber in the corner, so you can use that when you turn in. The exit kerb comes up quite quickly; the track definitely feels wider on entry than it is on exit.

2 CASCADES TURN 3

135mph
5th gear
GRAVEL TRAP
ALTERNATIVE TRACK LAYOUT
85mph
3rd gear

The kink before is easily flat; you go from the far left and meet the kerb towards the end of the kink so you're on the right for Cascades. There's quite a significant crest, and the car goes pretty light, so it's just a case of where you want to brake. You have to predict how the car is going to go over the rise. Because you've got ABS, on that initial hit when the car goes light you can't smash the pedal because that kicks in. You have a bit of a funny brake trace for that corner – you increase the pressure once the car is settled into the dip. It's a fairly early apex and you hold it for longer than some others because it's high speed. You can't 'V' the corner off. It's not massively bumpy and you can use the exit kerb.

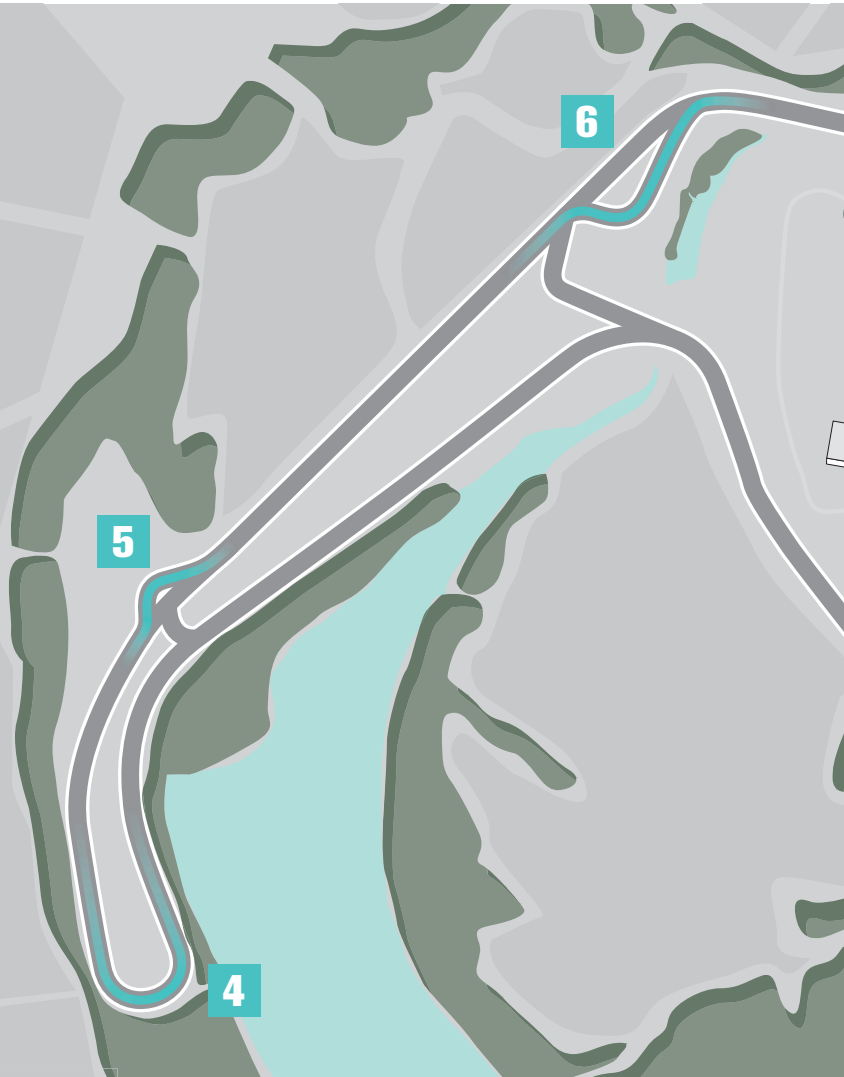
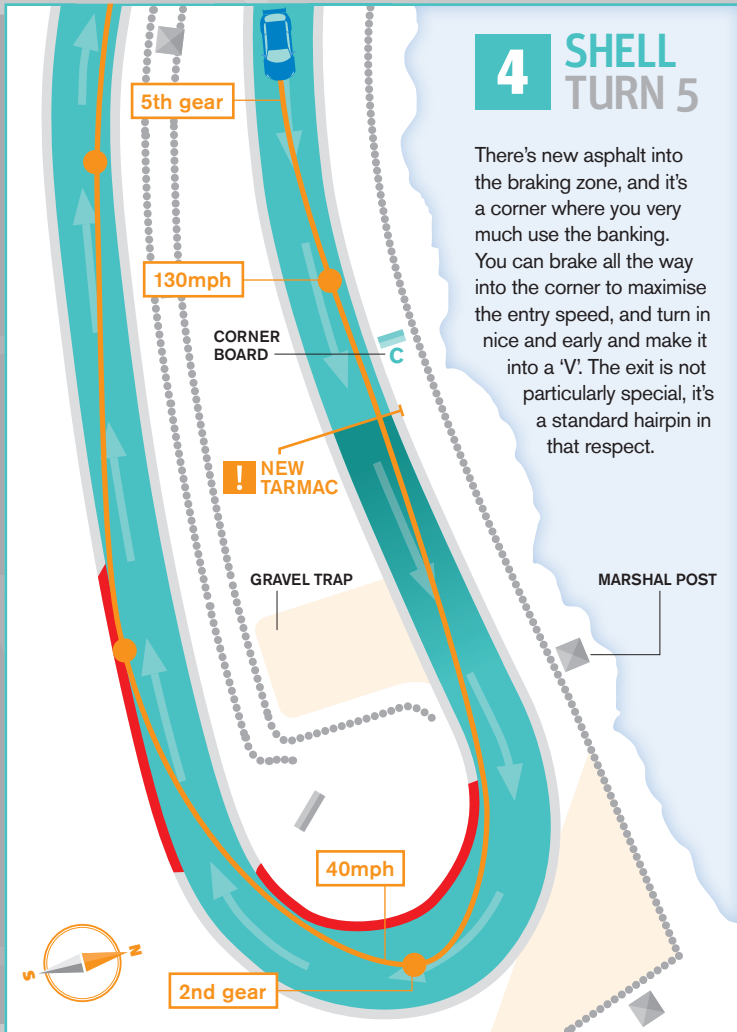
3 ISLAND BEND TURN 4

5th gear
145mph
ALTERNATIVE TRACK LAYOUT
DON'T USE INSIDE KERB
125mph
5th gear

The straight is quite bumpy and when you're overtaking slower cars you're running on the left-hand side of the circuit, which has bumps in different places and can throw you a bit. Turning into the fast left-hander needs a light dab on the brakes. You can turn in pretty much by the short hairpin; you turn in just after that. Because it's a high-speed corner and the inside kerb is quite aggressive, you don't want to use that. On the exit, you've got zero room for error, because of the speed and the fact that there's a corner right after it. People don't run out to the white line, so if you run a bit wide it's dirty and there's no exit kerb, and the barriers are very close, so it's a ballsy corner.

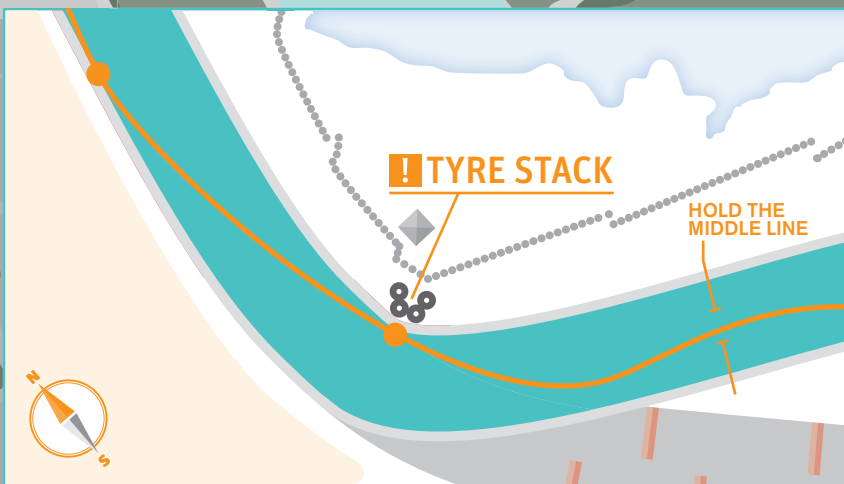
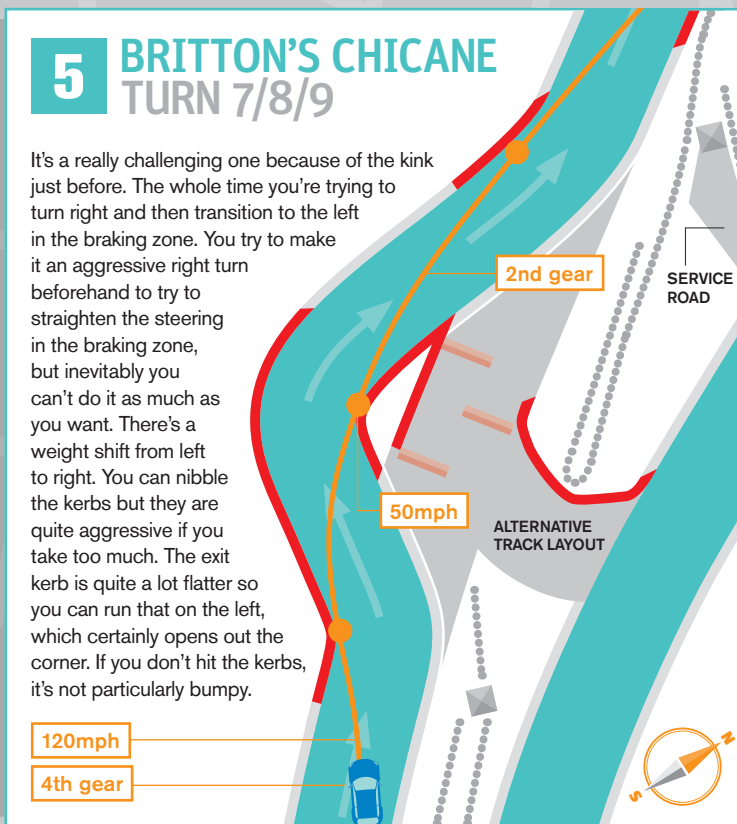
4 SHELL TURN 5

There's new asphalt into the braking zone, and it's a corner where you very much use the banking. You can brake all the way into the corner to maximise the entry speed, and turn in nice and early and make it into a 'V'. The exit is not particularly special, it's a standard hairpin in that respect.



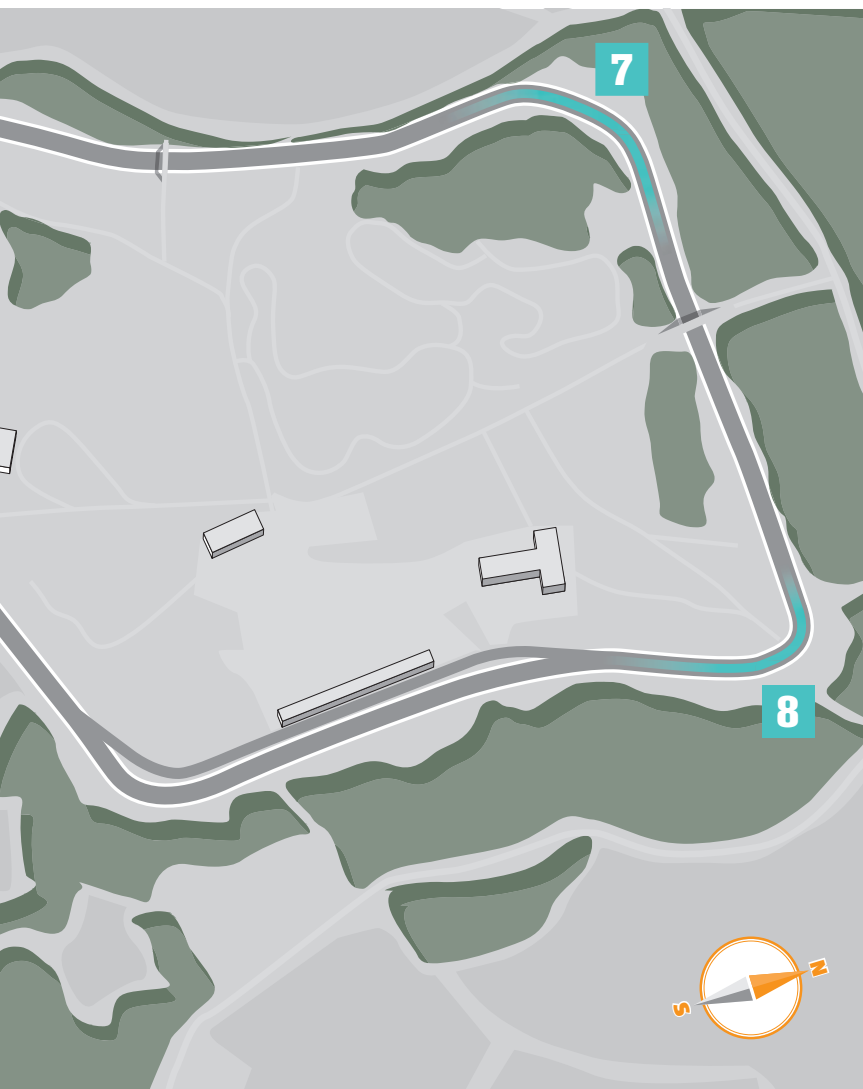
5 BRITTON'S CHICANE TURN 7/8/9

It's a really challenging one because of the kink just before. The whole time you're trying to turn right and then transition to the left in the braking zone. You try to make it an aggressive right turn beforehand to try to straighten the steering in the braking zone, but inevitably you can't do it as much as you want. There's a weight shift from left to right. You can nibble the kerbs but they are quite aggressive if you take too much. The exit kerb is quite a lot flatter so you can run that on the left, which certainly opens out the corner. If you don't hit the kerbs, it's not particularly bumpy.



6 HISLOP'S CHICANE TURN 10/11/12

It's a really late braking zone, close to the 50-metre board, and you try to take as much speed over the right-hand kerb as possible. I find it's always a barometer for how well the car performs through the braking phase if you can carry enough speed into the corner and over the kerb so that you're almost going fast enough to need a slight dab on the brakes to go left. Different cars require different techniques, but I sacrifice my speed through the left slightly so you don't use all of the track on the exit. I prefer to compromise it a bit



KEY CORNER

8 LODGE TURN 16

Braking into the last corner, it's quite bumpy. I treat that pretty much as a hairpin to be honest; it's not quite as a corner radius but I really attack the brakes, get it stopped and then plant the throttle on the exit to gain the most laptime. That's probably the one place I have to be careful of track limits on the exit, because of Jonathan Palmer's cameras! The car always wants to use a bit more exit kerb than there is available. Then it's a quick run up the rise at Deer Leap to the line.

A LONE OVERTAKING OPPORTUNITY

Overtaking is pretty difficult because it's so narrow. You've got to work hard when you're the car behind. Potentially into Old Hall, then it's pretty much a no-go all the way to the last corner! If you're ahead, and you block into the first and last corner, it compromises your exit severely. So whether it's the entry or exit, you can pull a move off at those two corners.

and keep it out on the left for Knickerbrook to open up the final right as much as possible. You sort of move the laptime into different corners! But I prefer to gain the laptime out of Knickerbrook. The inside kerb there is very bumpy and they normally put a nice stack of tyres just where you want to clip the kerb. I've brushed that a few times... The inside and outside kerb are very aggressive and you really feel it through the car if you run them, so that's not something to do every lap.

7 DRUIDS TURN 15

It's quite similar to the Britton's chicane but the other way round – the Water Tower just before is turning left and you're braking into a right-hander at Druids. So you go from the right side of the circuit fully across to the left, and brake as soon as the car is straight. You miss the first apex ever so slightly and get the second one – the shape of the corner is two right-handers but you just make it one, and join the apexes together. The exit is blind because there's a slight crest, so you have to judge your speed in the middle of the corner for where you believe the exit kerb is going to be. You can run that kerb and it's not particularly bumpy.

!
DON'T USE INSIDE KERB

PRODUCT SHOWCASE

P1 NUTRITION

Racing is intense. In competition, drivers face a sustained strain on the upper body, core temperature in excess of 85 degrees celsius, and an aggressive heart rate and oxygen consumption. Some might throw doubt on the physicality of motorsport, but the extremities are undeniable.

Managing nutrition is a crucial component of any sportsperson's regime, and while motorsport is progressing in this area it's playing catch-up nonetheless. Dedicated companies and products are few and far between. P1 Nutrition, a by-product of more than 25 years of motorsport experience, is aiming to change that by being the only nutritional company on the market targeting the physical needs of racing drivers.

By rolling out Race Fuel, its first product, the intention is to move drivers away from relying on supplements designed for other sports and provide bespoke motorsport nutrition. A petrol-engined car won't run on diesel.

A programme tailored for a rugby player, or a footballer, is no good for a cyclist. Why should it be for someone racing in single-seaters, GTs or touring cars?

The scientific formula behind Race Fuel uses bespoke protein, branched-chain amino acids (BCAAs) and electrolytes combined with a low carb, fat and sugar content. The 25 grams of whey protein per 30-gram serving make it a market leader not just in motorsport terms, but also in the fitness industry. This protein targets the sustained strain on upper-body muscles in order to enhance strength, stamina and recovery like no other supplement on the market. The low carbohydrate, fat and sugar formula is scientifically designed to reduce body fat in order to help a driver get the most out of their body.

The BCAAs aid in the absorption of protein to the key muscle groups such as the driver's shoulders, neck, arms and back. The electrolytes replenish the body with nutrients lost during high-temperature, high-sweat conditions. They also regulate the fluids throughout your body, as well as helping to control the high heart rate experienced while driving.

Ultimately, the purpose is to provide something that's not just effective over a race weekend and during training, it's to provide a product capable of maximising performance in both areas. That's something motorsport's not had the luxury of enjoying until now.



P1 Nutrition Race Fuel
£48.99 with free shipping to the UK
2.27kg – 67 servings

- Available in
- Strawberry Milkshake
 - Gourmet Chocolate
 - Vanilla Ice Cream

Visit www.P1Nutrition.com



POLAR V800 WATCH

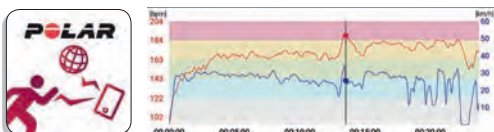
Drivers are a competitive breed. In a sport where tenths, hundredths and thousandths of a second can make a massive difference, you can't afford to be anything else. Look at the number of drivers who take on other sports as a way of keeping fit, or maintaining motivation.

Polar's V800 watch is its top-of-the-range product, a coach you can wear on your wrist. It turns you into your own fiercest competitor by giving you everything you need to know to boost your performance.

As well as offering extensive personalisation and having completely customisable 'sport profiles', the wealth of activity information available is seriously impressive. Training load, calories, heart rate, recovery status – and more – are all features that allow the V800 to measure not just every training session, but every minute of your day. The mobile app and computer software enable you to break down each session or activity in more detail – and, given that you can track your route and distance via GPS, or tailor it to a pool length and your swim stroke, it is an all-encompassing bit of kit.

Mobile app helps to analyse activity benefits

V800 can measure training load





ROCK OIL

From a race-winning partnership with the SWR BRDC Formula 4 team (above) to tying up with the British Rallycross Championship-leading Albatec Racing outfit, Rock Oil has hit the ground running as it expands its efforts in motorsport.

The Albatec relationship centres around the team, which last year ran 1997 Formula 1 world champion Jacques Villeneuve in the World Rallycross Championship, using Rock Oil's Carbon range. This is billed as a series of lubricants that mark a "major breakthrough" for the industry, utilising top-of-the-range chemical technology to maximise performance and reliability in its engines.

Market-leading additive technology has been

combined with the three types of advanced next-generation synthetic base stocks. Independent tests have shown that conventional synthetic ester base oils of the polar type have an affinity for internal engine surfaces that can actually be detrimental to wear protection – the Carbon products do not have this characteristic.

The company has undertaken a vigorous and intense succession of development from the laboratory to the racetrack, with the aim of achieving not only peak protection, but performance as well.

Visit www.rockoil.co.uk



WTCC star Yvan Muller drove Albatec Peugeot

WALERO

The base layer NASA built has hit the ground running in 2014, with a variety of competitors in a range of disciplines using Walero's FIA-compliant, thermal-smart underwear. In terms of educating the masses about the way the Walero layers keep you cool when you're warm, and vice versa, it's been very much mission accomplished.

Walero itself has been encouraged by the range of drivers using its product, from club racers to British Touring Car champion Colin Turkington, and a number of endurance racing drivers in the UK and overseas. And it's adding something new to its production line.

Most body heat escapes from a person's head and feet, which is one of the reasons why the head is a part of the body that sweats more than most. Handy, then, that Walero's latest addition is a balaclava – or 'head sock' – that uses exactly the same technology as its base layers.



TOP TIPS HOT CONDITIONS

Pop the clothing in the fridge or freezer and you will get extra benefit.



ARE YOU READY?



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5 THINGS TO KNOW ABOUT TYRES

GET THE BEST FROM YOUR RUBBER

1 SCRUB/RUN THEM IN

You should subject the tyres to a gentle heat cycle, and this means starting gently on new tyres and building up speed gradually. It's a three or four-lap process and should not culminate in a flat-out lap, but rather one performed at about 80 per cent. Then leave the tyres as long as possible to cool down – ideally at least 24 hours.

2 STORE THEM

The best method of storing tyres out of season is in a dry place. They should be kept under covers, but somewhere that is well ventilated and not subject to extreme temperatures – whether that's frost or high heat. Tyres need to be kept away from anything that can manipulate the chemical construction – bright lights, heavy electric machinery and petrochemicals, for example.

3 GET THE PRESSURES RIGHT

Ultimately these will come down to the car, tyre, track and conditions, but there are some basic parameters to monitor in the first instance. Keeping tabs on the weather is easy enough, but you should also check the ambient and track temperatures. What you need to watch out for thereafter are the starting pressures when the tyres are cold, and be checking pressures after a few laps of running and while the tyres are hot, using dry air if possible. It's important to regularly check tyre pressures after each session.



4 MONITOR WEAR

The best way to do this is to use a probe-type pyrometer to check tyre temperatures across the tread area, and adjust set-up if necessary. You can rotate tyres left to right, front to rear, to help keep wear even. At most UK circuits the left-hand side will wear faster than the right-hand side, as they usually run clockwise.

5 DEGRADATION

Degradation is a thermal process, whereas wear is physical. So degradation is about the tyres overheating and performance dropping off that way, compared with the tyre rubber being eaten away over time. Changes you make to tyre pressures or car set-up can benefit one but impact poorly on the other – so be careful, know the difference, and apply this to your testing programme.



XPB IMAGES

HOW TO BECOME A RACING DRIVER

PAT BLAKENEY, CHAIRMAN OF THE ASSOCIATION OF RACING DRIVER SCHOOLS, EXPLAINS WHAT'S INVOLVED

WHAT CAN YOU DO WITHOUT A RACE LICENCE?

Track days and privately hiring circuits are the limitation but driver-experience days are also a good way of getting on track for the first time. Although the majority of these are not performance related, they do whet the appetite for a large number of drivers who then take the next step to either track days or going racing. It's worth pointing out that you can obtain a 'speed' licence and do Hillclimbs/Sprints without doing a course or having a medical.

WHAT CAN YOU DO WHEN YOU'RE UNDER 16?

Your options are 'junior' championships – such as the Ginetta, Ford Fiesta and Saxmax series – and the FIA Formula 4 single-seater championships. The Junior ARDS test is for 14- to 16-year-old drivers who intend to compete in one of the UK's 'junior' championships. These drivers tend to be graduates from karting. The Junior ARDS Course/Test is a full day (as opposed to a half-day day for seniors) and focuses far more on the actual driving. Obviously these drivers have no prior road-driving experience so particular emphasis is paid to gear changing/clutch control etc. They'll also go through how to be recovered (from a gravel trap), towed and how to bump start a car. Once the course is completed then the championship coordinator for the series that they're racing in will 'hold' their licence, which will then be taken to all official tests/races. Once they reach 16 then this licence can be exchanged for a full senior (Nat A or B depending on their experience/races completed). If racing in a junior championship then they must remain under the junior licence, even though they could be 16 or over.



A young racer gets the ARDS all-clear



Experienced Blakeney is chairman of ARDS

WHAT IS AN ARDS TEST?

The test is what you need to pass in order to gain your National B racing licence. It comprises a written examination and practical evaluation.

HOW DO YOU ARRANGE IT?

Purchase the Motor Sports Association's 'Go Racing starter pack', priced £95 (which includes the cost of the first licence). The pack includes a Competitors' Yearbook (also known as the 'blue book' containing the UK motorsport regulations, lists of scrutineers and other useful information), a DVD, a novice licence application form and full instructions on the procedure for obtaining a Race National B Licence. Then contact an ARDS member school.

WHAT DO YOU NEED TO DO BEFORE?

Study the 'Go Racing' DVD and most importantly get prior track experience/tuition. If you have your own helmet, boots etc then feel free to bring along (always nicer!). Failing that the school will supply all

that is required. Don't forget your licence application – it does happen!

Those 16 and under don't need a medical (self-declaration). The MSA ask that the medical is completed prior to doing an ARDS course. However, the validity of the medical is only 3 months (from the date the medical is taken to the date the application is submitted) so the pupil needs to ensure they have a test date booked. The 'pass' signature/stamp from the ARDS member school is valid for 12 months from test date.

Complete a medical test – you'll find what you need in section three of your licence application form, but it should cover off a 12-lead resting electrocardiogram (if under 45 years old), a stress-related ECG (if 45 or over), any abnormality of the heart or cardiovascular system, any evidence of a physical or mental condition in the applicant's medical history, any history of epilepsy, seizures or any other neurological conditions, any physical abnormality or restriction of movement in the arms or legs. There will also need to be a vision test and urine examination.

WHAT DOES THE TEST COMPRISE?

The written test is in two main parts; the first part deals with flag signals and the pupil will need to correctly identify/write down all the flags from descriptions given (including if waved or stationary). The second part is 'multiple choice' – and is mostly common sense.

Instructors on track will be looking for a reasonable understanding/application of racing lines, braking, clutch control, steering, observation etc. The pupil will not be assessed on speed; obviously they'll need to drive at a reasonable pace but lap times are not used. The criteria to pass is generally that the pupil would not be a danger to themselves or others on the track and that the instructor feels comfortable being on track with the pupil on a test/race day! The pupil MUST remain in full control of the car at all times (running off track or spinning would equal a fail).

WHAT DO YOU DO NEXT?

All schools would explain the MSA licensing process/upgrading etc and would also point out that although you now have a licence, the learning process has only just started. At present, once you've completed the ARDS course and received your first Nat B licence from the MSA, so long as you renew each year, you won't have to do the course again – even though you may never have raced! ■

FOR MORE INFORMATION VISIT WWW.MSAUK.ORG/GET-STARTED

MSVT

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STEP 4
ARDS TEST

STEP 5
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Enter our novice-level race series, designed to help you go from a track day driver to a national racer.



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ValetPRO Competition

We have 50 sample tubs of “Beading Marvellous” and “Black to the future” to give to the first 50 **AUTOSPORT** readers who email us with the name of the race track below. Please use our contact form on our website. www.valetpro.eu/contact.html



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