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F1 2015 LAUNCH SPECIAL

AGGRESSIVE NEW McLAREN-HONDA

“Performance first... reliability follows”

Ron Dennis

**GARY
ANDERSON
ON EIGHT
NEW CARS**








**39
DAYS
TO GO!**
F1 2015



Vettel flies on Ferrari debut • Mercedes still the team to beat

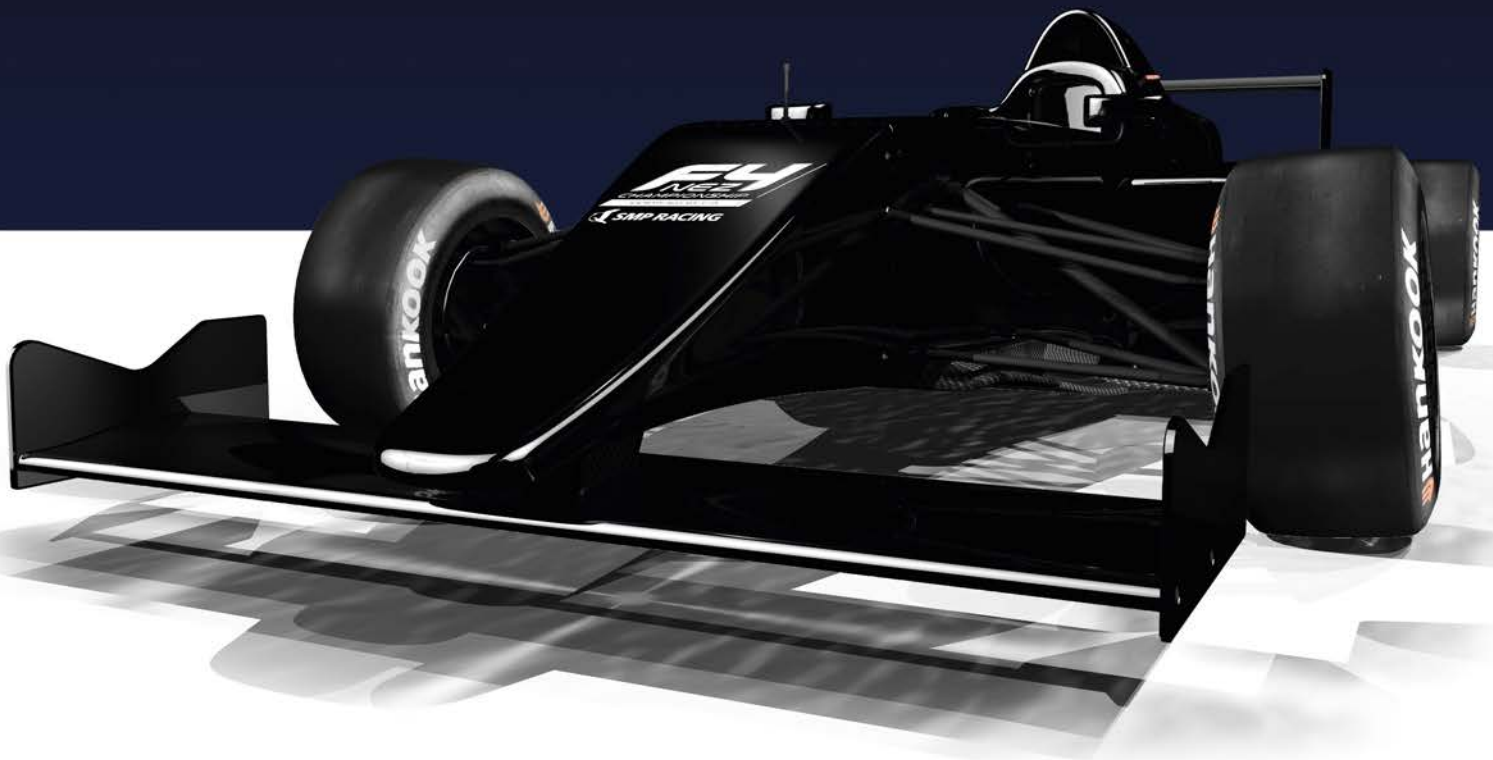
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POLE POSITION

Results will determine if the approach was right

‘AGGRESSIVE’ IS ONE OF THOSE FORMULA 1 LAUNCH-season words with two meanings. Which one is most appropriate cannot be decided until much of the campaign has played out.

McLaren is making much of how aggressive the design and technology of the new MP4-30 is. It certainly looks purposeful, as this week’s cover image proves. But whether it is aggressive by the way of creative brilliance, or in terms of being overambitious and unworkable, remains to be seen. ‘Aggressive’ is like the word ‘conservative’. If your car slips down the order, conservative means unambitious. If you continue to do well, it’s a sensible evolution.

As I write, Fernando Alonso has just turned the first flying lap for the car on the third day of the Jerez test and the sound of the Honda engine being fired up continues to be something of a novelty. It’s too easy – and dangerous – to mock the initial troubles of a new engine and there is no doubt there is tremendous potential there.

Time will tell whether the word ‘aggressive’ is a good or a bad thing for McLaren. But given the interest in F1 that Honda’s return has generated, the faster the team can get into the mix up front, the better it will be for the sport.



EDD STRAW EDITOR
 edd.straw@haymarket.com
 @eddstrawF1

COVER STORY

“Have we taken some calculated technical risks? Yes”

Ron Dennis on Honda, p14



TEE/LAT

FIND US ON



Cover image: Tee/LAT

PIT & PADDOCK

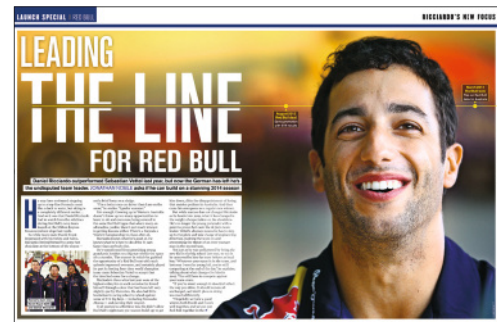
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MERCEDES MAKES TO 2015

F1's pre-season testing kicked off at Jerez on Sunday.

EDD STRAW explains why the team *not* at the top of the timesheets has good reason to be pleased with progress

Formula 1 teams do not cover 432 miles of running, complete long runs and fit in 17 practice pitstops because they've run out of things to do on their schedule on the first serious day of running with a new car. Well, they didn't until the new Mercedes F1 Wo6 hit the track at Jerez last Sunday. While Ferrari stole the limelight with Sebastian Vettel topping the timesheets on the first two days of this week's opening test of 2015, the Silver Arrows lurked ominously in the middle of the pack. The Mercedes remains the car to beat.

Only a water leak, suffered with Lewis Hamilton at the wheel during Monday afternoon, not long before rain hit the track in southern Spain, derailed the progress Mercedes was making. And even then he had already logged 91 laps. The headline pace wasn't what had the rest of the pitlane worried; it was the fact that the car was running well straight out of the box and the drivers were content. There was never any reason to expect Mercedes to be knocked off its perch at the top of F1 without making serious errors, and the first two days of testing certainly disabused anyone of the notion that the race team in Brackley and the engine shop in Brixworth might have blundered during the winter.

Publicly, the team was as keen to downplay how well things had gone as it was unconvincing in doing so. Even taking into account the fact that the car had completed a day of promotional running the previous Thursday by way of a shakedown, it was a remarkable start. As team boss Toto Wolff put it: "Nico [Rosberg] says it's one of the best first days he's had." Given that Rosberg is heading into his 10th season in F1, that's a powerful statement.

"No, we're not ahead of the game, no," claimed Rosberg. "We got off to a good start for ourselves, I'm not comparing us with anyone else because it's not possible to compare at the moment. We can only judge in terms of what we wanted to achieve today and we managed to achieve it. And with the pitstop practice at the end, for us it was a good start." ▶

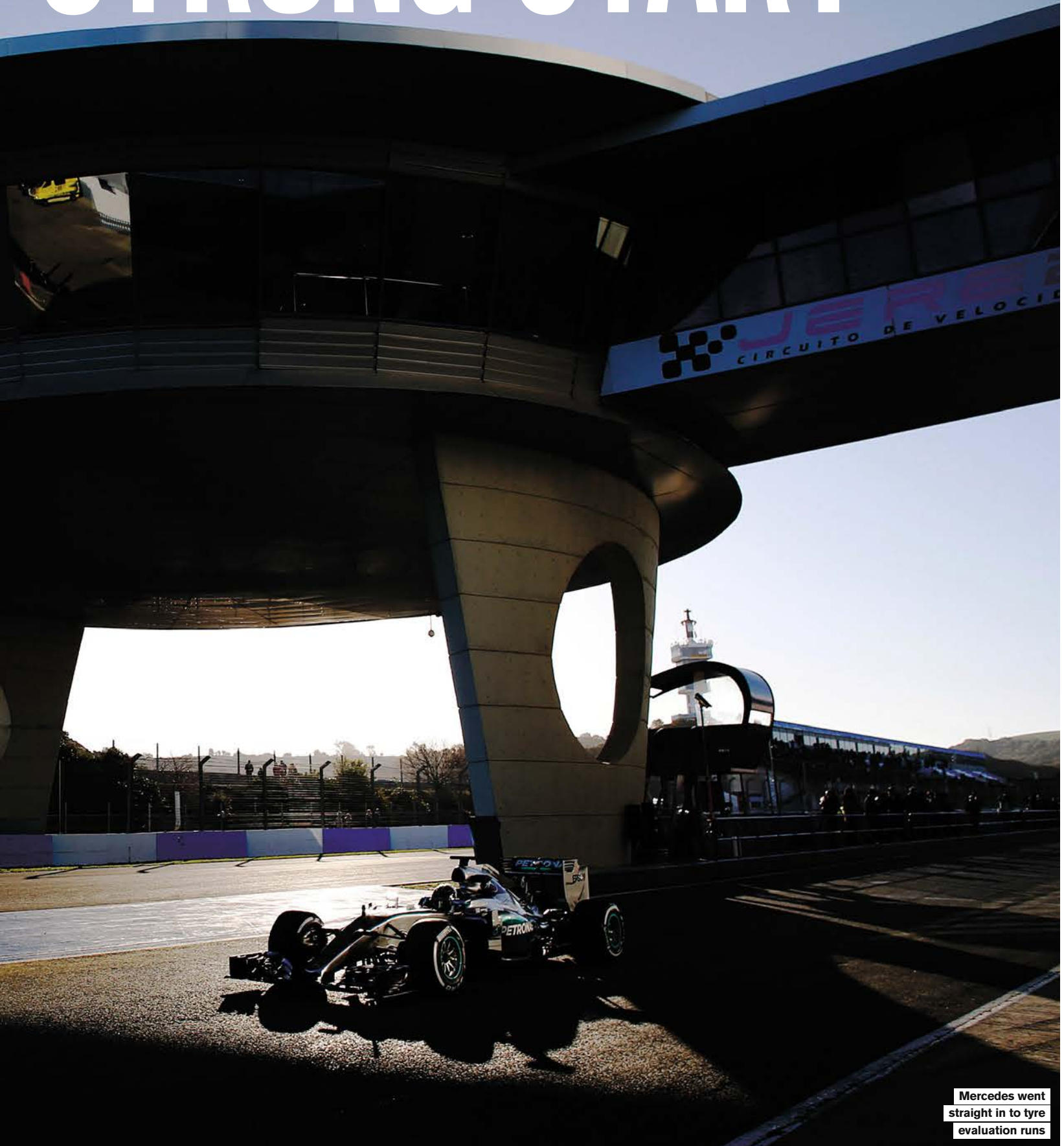


Failure to bring a 'selfie stick' was Merc's only shortfall

STALEY/LAT

STRONG START

TEE/LAT



5

Mercedes went straight in to tyre evaluation runs

BATCHELOR/XPB



Felipe Massa took to the cockpit on the third test day

Rosberg did a good job of keeping a lid on his enthusiasm in public but, no matter how on message he was, the bottom line was that this was a great start for Mercedes.

“Obviously there are details to work on,” said Mercedes executive director (technical) Paddy Lowe. “You can’t relax. Mileage is one thing but performance is another, and this is the stage where we are looking for reliability to get the confidence that the running gear is in a good state. Performance is another subject, and from every day’s running we debrief and try and find those opportunities to push forward performance.”

The devil is always in the detail in F1, but Mercedes was able to push on with such work very rapidly. Rosberg completed a 42-lap run on Sunday afternoon – a two-thirds race distance – using the regular hard tyre. This was backed up by team-mate Hamilton also completing a lengthy run on day two, using the winter prototype hard, in which he went beyond half a race distance.

While there have only be hints of the ultimate performance of the car, few expect the Mercedes to be lacking in speed.

SPEED TRAP FIGURES, FEB 1-2

1 Williams	190.1mph
2 Mercedes	188.5mph
3 Sauber	188.5mph
4 Lotus	187.4mph
5 Toro Rosso	185.9mph
6 Red Bull	181.8mph
7 McLaren	140.1mph

*No accurate speed available for Ferrari

ROSBERG'S DAY-ONE LONG RUN

This plots Rosberg's early long run during day one of the test. He completed 42 laps (including his out and in-laps), showing remarkable consistency considering this was a car so early in its life. It shows the 40 timed laps on the run on the hard-compound Pirellis.

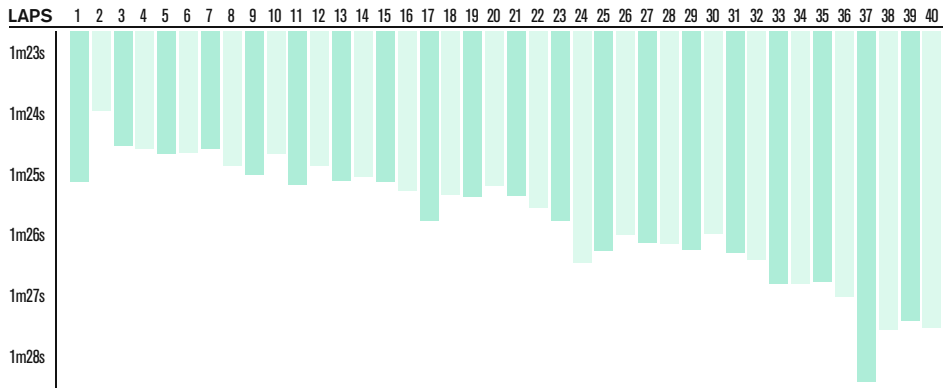
Most encouraging for a car on only its first day is the fact that

the Mercedes, even in unrefined state, was able to get relatively consistent performance out of the rubber with a steady drop-off. While Jerez is unrepresentative in terms of tyre use given the abrasiveness of the track surface – unique among all tracks regularly used by Formula 1 – this hints at a relatively well-balanced car

that likely does not work the tyres too hard.

Rosberg set a time of 1m23.953s on his second flying lap which, considering the fuel load he was carrying and the fact that he was embarking on such a long run, shows that the Mercedes was still some way off showing its true raw speed on the first two days at Jerez.

LONG-RUN PACE ANALYSIS



6

ENCOURAGING ENGINE STEPS

Much of the focus over the winter has been on the changes to the interpretation of the engine-homologation regulations, which allow changes to be made during the season. While these are still governed by the engine-token system, this allows developments to be staggered through the year.

But it was encouraging for Mercedes, not to say demoralising for those without the German power units, to run so cleanly with a powerplant described by engine chief Andy Cowell as “completely new”, while still within the bounds of the changes permitted under the engine-homologation regulations. This allows Mercedes to evaluate various upgrades before committing to its season-starting specification.

Mercedes completed 248 laps on the opening two days (Ferrari-engined Sauber was second best on 161), suggesting that no major problems have been inadvertently engineered in.

SEAMLESS STEP FROM 2014

Hamilton was cagey after his first day in the car on Monday, but admitted that the new Mercedes was a step forward from its predecessor on downforce generated. Given the detrimental impact of the change to the nose regulations, this suggests good aero progress has been made.

“It feels very much the same,” he said. “I’m even using the same seat from last year, the steering wheel is the same, the cockpit is the same. You just have a little more downforce. The characteristics of the car feel pretty much the same too. Inevitably we have taken a step. How big that is, I really couldn’t say. We weren’t out there trying to do fast lap times.”

THE PACESETTERS

The teams that were at the head of the timesheets were Ferrari and Sauber. Vettel was fastest on each of the first two days, setting a



ISITINE/GETTY

KVYAT'S NIGHTMARE START

Daniil Kvyat will have plenty of much better days driving Red Bull grand prix cars. But on Monday, his first outing of his maiden season with the team, an early off condemned him to spending much of the day doing brief runs without a front wing.

The Russian ran wide exiting Turn 2 while on an installation lap thanks to being distracted by changing some settings on the steering wheel. He grazed the wall, damaging the only front wing Red Bull had at Jerez that day. He completed 18 laps, and did not set a time.

“These things happen, and it happened at the wrong moment,” he said. “I hit the wall extremely softly. It was one of the smallest incidents I’ve

had, but one of the most costly ones.

“There were many factors, including cold tyres, and I was going very slowly but sometimes it’s not enough. You don’t spin on the out-lap every day.”

The new Red Bull, bedecked in a camouflage testing livery, had a solid start on Sunday in the hands of Daniel Ricciardo. But it remains to be seen how big a step the Renault-engined car has made. It is hoped that the power-unit deficit to Mercedes can be at least halved.



432 **BIG NUMBER**
Miles completed by Nico Rosberg's Mercedes on the opening day of the test

Rosberg completed a very impressive long run early on



ISTITENE/GETTY

fastest time almost 1.5s faster than the best achieved at last year's Jerez test. A full analysis of Ferrari's start is on page 20.

Surprisingly, Sauber was second fastest on each of the two days, first with Marcus Ericsson and then with Felipe Nasr. While this pace is not representative of the Swiss team's real place in the competitive order, it was a productive start for a team attempting to bounce back after a dire 2015 season.

"It's a good step forward from what I saw last year, both in terms of chassis and engine," said Nasr. "I'm looking forward to seeing how much we develop it."

ENCOURAGING START FOR WILLIAMS

Williams had a delayed start to the opening day of the test after a power-unit installation problem was detected, but when Valtteri Bottas finally took to the track the car ran well. He ended up

third-fastest overall during the opening two days.

"The initial feeling was good," said Bottas. "I feel it's a good base to build on. The car was behaving really consistently. Immediately after the first few laps, I had a good feel of the car."

Bottas's satisfaction with the early running of the car has encouraged the team, which is expecting to close the gap to Mercedes at the front of the field having been its nearest challenger in the 2014 season finale in Abu Dhabi. Technical chief Pat Symonds stated he was happy with the downforce levels of a car that is very much an evolution of its successful predecessor. But he was just as encouraged by the Finn's positive reaction to driving the FW37.

"Even in these days of it being a very technical sport, I still pay a lot of attention to those first [driver] comments," he said. "Valtteri's comments yesterday were very positive; he feels that the car is a step forward."

THE REST

Red Bull made a solid start on Sunday, but suffered a setback on Monday (see panel), while sister squad Toro Rosso, which has set what is surely an overambitious target to finish fifth in the constructors' championship, was encouraged by its car performance despite stopping on track on Sunday after a warning alarm sounded.

Latecomer Lotus did not arrive in the paddock with its new E23 car until Sunday night, one day into the test, but to everybody's surprise Pastor Maldonado was ready to run on Monday morning. A 'drivetrain' problem caused him to stop on track in the afternoon, but the team was satisfied with its first day running the Mercedes engine.

On the opening two days, the 'aggressive' McLaren-Honda MP4-30 managed only 12 laps of Jerez, though progress was made later. For the full story of its struggles, see page 14. ❧



INTERIM TIMES

JEREZ FEBRUARY 1-2

1	Sebastian Vettel (Ferrari)	1m20.984s
2	Felipe Nasr (Sauber-Ferrari)	1m21.867s
3	Valtteri Bottas (Williams-Mercedes)	1m22.319s
4	Lewis Hamilton (Mercedes)	1m22.490s
5	Marcus Ericsson (Sauber-Ferrari)	1m22.777s
6	Nico Rosberg (Mercedes)	1m23.106s
7	Daniel Ricciardo (Red Bull-Renault)	1m23.338s
8	Max Verstappen (Toro Rosso-Renault)	1m24.167s
9	Carlos Sainz Jr (Toro Rosso-Renault)	1m25.327s
10	Pastor Maldonado (Lotus-Mercedes)	1m25.802s
11	Fernando Alonso (McLaren-Honda)	1m40.738s
12	Jenson Button (McLaren-Honda)	1m54.655s
13	Daniil Kvyat (Red Bull-Renault)	no time



Ericsson spun the Sauber on opening day

ISTITENE/GETTY

THE TEST WAS DUE TO FINISH YESTERDAY (WEDNESDAY) | FOR THE UP-TO-DATE NEWS VISIT AUTOSPORT.COM

This week in F1

LOTUS MAKES LATE START AT JEREZ

Lotus missed the first day of the opening pre-season test at Jerez.

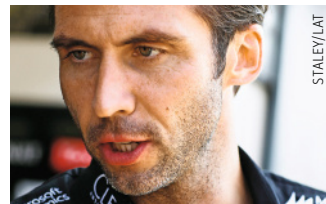
The new Mercedes-powered E23 only left the team's Enstone factory on Sunday afternoon – the first day of the test – following a decision to build up the car as late as possible. The team anticipated it might not

have been able to join testing properly until Tuesday, but Pastor Maldonado completed the first installation lap with the new car just over an hour into Monday's running.

Lotus endured a disappointing 2014 campaign that resulted in it ending its long-time partnership with

engine supplier Renault. Its switch to Mercedes power for this season has left it upbeat that it can get back to challenging for podium finishes.

Lotus CEO Matthew Carter (right) told AUTOSPORT: "Finishing third or fourth in the constructors' championship is really our target."



8

Lynn gets Williams F1 role

GP3 champion Alex Lynn has joined Williams as a development driver for 2015.

The role will involve extensive simulator work and a day of on-track testing following the Spanish Grand Prix.

Lynn will dovetail Williams duties with his deal to race for champion team DAMS in GP2.

Lynn said: "I hope I can follow in the footsteps of Valtteri Bottas, who joined the team in exactly the same role."



McLaren plots car-livery change

McLaren will change the livery of its new Formula 1 car only when big sponsors come in to justify the switch, according to team chief Ron Dennis.

"This is the livery of McLaren," he said. "It's always been a combination

of these colours, and it will only change for commercial reasons.

"It won't change just to make a few people in the company happier because they want it orange or they want it yellow."



PAT CARVATH 1936-2015

BRM mechanic Pat Carvath, who helped Graham Hill win the 1962 world championship, died suddenly on January 24.

A long-serving member of BRM (from 1952-74 with a three-year gap for national service), when Carvath retired from the race team he was put in charge of building new cars for the constructor. He is survived by wife Yvonne and their family.

For all the breaking news, visit AUTOSPORT.COM



Newey not expecting Red Bull title bid

Red Bull technical wizard Adrian Newey does not expect Renault to have made the progress needed to enable his team to challenge for the world championship. On the back of a disappointing 2014 campaign, Newey believes it unrealistic to expect the French car manufacturer to have fully closed the gap to F1 pacesetter Mercedes.

"This year will really be about continuing to try to move forward and reduce the deficit," he said. "If we can manage the odd win, as we did last year, then that would be fantastic."



That was quite fun, and we thought it would be interesting to extend that concept to the whole car. Dietrich [Mateschitz] liked it when he saw it.



Christian Horner: Red Bull camouflage livery was inspired by a Sebastian Vettel helmet design.



Mercedes coy on engine mods

Mercedes says that it will only decide on how to use its engine-development tokens once Formula 1's pre-season testing is finished.

A rules clarification over the deadline for submitting 2015 specifications to the FIA means manufacturers no longer have to complete their work in time for the season-opening Australian Grand Prix on March 15.

Mercedes engine chief Andy Cowell said: "This decision hasn't altered our strategy for 2015, which was always to gather the necessary data from pre-season testing in order to define and submit the engine specification for the opening race.

"However, it does offer the opportunity to exploit this interpretation for further gain later in the season."

RICCIARDO: Drivers would relish 1000bhp

Daniel Ricciardo has no doubts that Formula 1 drivers would back a move to 1000 horsepower engines in 2017, and thinks it will help the top stars better show their talent.

"It would be nice to have some corners on the calendar where the real good guys are taking it full [flat], and the ones who don't have that last bit of commitment are having a lift," Ricciardo said.

Red Bull team boss Christian Horner agrees that more-powerful cars are needed to show up the best drivers.

"We need to make the cars more spectacular, harder to drive, so that the difference in drivers becomes more apparent," said Horner.



Tost: Fifth no fantasy target for Toro Rosso

Toro Rosso team boss Franz Tost reckons that finishing fifth in the constructors' championship is a realistic target for his team in the 2015 season, because of aggressive developments made over the winter.

"With the package we've got from the car side, the driver side and the financial side, we simply must be in a position for fifth in the championship," Tost said. "I am convinced we can achieve it."

BIG NUMBER

155

The amount of extra points Toro Rosso would have needed to beat McLaren to fifth in the 2014 constructors' championship.

NO ALARM AT MERC OVER HAMILTON CONTRACT

Lewis Hamilton and Mercedes insist there is no alarm over no new deal for 2016 in place yet, despite "sticky parts" of discussions to overcome.

Hamilton said: "I know the team want to sign me, and vice versa. It would be good if we got the sticky parts out of the way early on, but I've still got

the rest of this year with the team. I'm sure it will get sorted."

Mercedes boss Toto Wolff, who has previously said Fernando Alonso is a fallback option if Hamilton leaves, added: "The relationship we have with each other is very solid. I have no doubt we will eventually strike a deal."



This week in motorsport



TOYOTA RETURNS TO RALLYING WITH YARIS

Toyota's return to the World Rally Championship in 2017 will be a success, according to the marque's 1993 World Rally champion Juha Kankkunen.

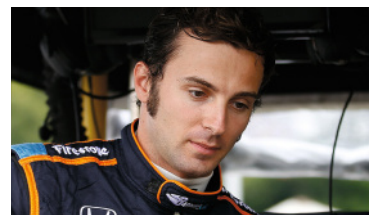
The news that Toyota would be back in the WRC for the first time since it departed as manufacturers' world champion in 1999 was broken at a press

conference in Tokyo last Friday. The Japanese firm's Cologne-based Toyota Motorsport GmbH arm will spend the next two seasons further developing the Yaris WRC, which it started testing last year.

Kankkunen said: "It is great, great news that they're coming back. They have good resources and I'm sure they will come back in the right way."

Toyota's World Endurance racer Stephane Sarrazin, sometime WRC regular Sebastian Lindholm and French Toyota junior protege Eric Camilli will carry out testing duties through the next two years.

Toyota president Akio Toyoda said: "We are doing this to make better cars and to make people smile."



LEVITT/LAT

Filippi gets big IndyCar break

Luca Filippi has joined CFH Racing for IndyCar's road and street-course events.

The Italian GP2 veteran gets his biggest IndyCar break to date in sharing the #20 car with oval specialist and team co-owner Ed Carpenter. Josef Newgarden will race full-time in the Chevrolet-powered team's other entry.

Funding U-turn kills Brazil race

IndyCar's scheduled season opener at the Autodromo Nacional Nelson Piquet in Brasilia has been cancelled after the local government withdrew its funding.

Promoter BAND TV informed the series of the decision late last week. The race, which would have been IndyCar's first in Brasilia, had been scheduled for March 8.

Two thirds of the grandstand tickets had been sold at the time of the cancellation, and a title sponsor had been announced just one day prior. The 2015 IndyCar season will now open with the traditional St Petersburg race in late March.

BIG NUMBER

24

NASCAR Nationwide champion Chase Elliott will race the famed #24 Hendrick Chevrolet in 2016 when Jeff Gordon quits full-time Sprint Cup action.



KINRADE/LAT

HARD BACK IN THE BTCC

Sometime British Touring Car Championship racer/team owner Tony Gilham intends to return his Team Hard operation to the grid in 2015 with a Toyota Avensis.

Gilham, whose team most recently raced in the BTCC in 2013 with the Vauxhall Insignia and Volkswagen CC before they were taken over by Team BMR, has agreed to buy one Avensis and TOCA BTCC Licence from United Autosports. The deal is subject to TOCA approval, but he hopes to acquire the team's second Avensis and licence. No driver has yet been named.

"I'm absolutely over the moon," he said. "We want to have a long-term future in touring cars."

● Inaugural Jack Sears Trophy winner Lea Wood will not contest the BTCC in 2015. He will take a management role in his Houseman Racing team instead.



Blomqvist and Auer for DTM

Formula 3 European Championship runner-up Tom Blomqvist will race for BMW in the DTM this season.

The Anglo-Swede impressed during a test in the BMW M4 DTM at Jerez last December, and replaces American Joey Hand in the Munich marque's line-up.

Blomqvist's F3 rival Lucas Auer also steps up to the DTM this year.

The Austrian, second in the Macau Grand Prix, joins Mercedes.

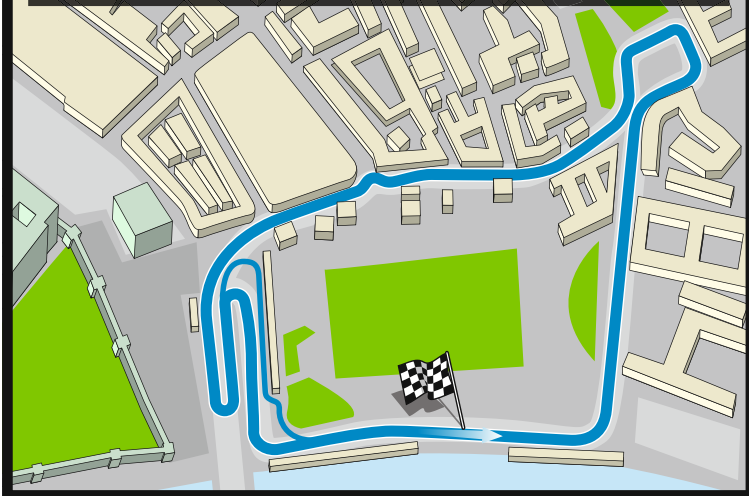
Auer will drive for DTM newcomer ART Grand Prix. He will be joined at the French team by Gary Paffett, the 2005 champion moving from HWA after five years with the main squad.

Auer's signing leaves ex-F1 driver Vitaly Petrov out of a drive.

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

Formula E goes to the Kremlin

Formula E has secured a race in Moscow – on a circuit adjacent to the Kremlin – to be held on June 6. The addition of the Russian event to the schedule means Berlin's race is brought forward to May 23.



Kobayashi is back in Japan

Caterham Formula 1 refugee Kamui Kobayashi has been placed in Toyota's line-up for his first year in Super Formula, Japan's premier single-seater series.

The 28-year-old was fastest in his Super Formula tryout with Team Le Mans at Okayama last December, and joins the squad to replace Loic Duval, who is thought likely to be concentrating on his World Endurance commitments with Audi.

Meanwhile, Italian Andrea Caldarelli, who has earned a supersub status while filling in for Duval and Andre Lotterer, has gained a full-time ride with another Toyota squad, Team Impul. Caldarelli, who already races for Toyota brand Lexus in Super GT, replaces Narain Karthikeyan.

Ex-Formula Renault 3.5 champion Bertrand Baguette also joins Super Formula. He will race for the Nakajima Honda team with which he also competes in Super GT.

In brief



CASSIDY'S TOM'S DRIVE

Macau Grand Prix podium finisher Nick Cassidy has earned a top drive in Japanese Formula 3. The New Zealander, for whom this will be the first full F3 season, will drive for the works-blessed Toyota team TOM'S, alongside Macau top-10 finisher and Toyota protege Kenta Yamashita.

DOUBLE FOR DOUBLE R

British team Double R Racing has snapped up two drivers for the F3 European Championship. Hong Kong's Matt Solomon, runner-up in Formula Masters China last year, will be joined by German Euroformula Open graduate Nicolas Pohler at the Mercedes-powered squad.

F3 MASTERS IS GO

The Masters of F3 at Zandvoort will be for current FIA-spec cars this year, its 25th running, after being run for national F3 machinery in 2014. Organisers are hopeful of a strong field for the Dutch event, which takes place on September 20.

NEGRI BACK IN EUROPE

US sportscar regular Oswaldo Negri Jr will race in Europe for the first time for more than 20 years after signing up to contest four of the five European Le Mans Series races in Krohn Racing's Ligier-Judd/BMW JSP2. The Brazilian, who finished fourth in British F3 in 1992, will share with Tracy Krohn and Nic Jonsson.

REBELLION'S POWER

The Anglo-Swiss Rebellion Racing WEC team has decided against continuing its engine-supply deal with Toyota for 2015. It has yet to announce which engine will replace the naturally aspirated 3.4-litre V8s in its ORECA-built Rebellion R-Ones.

CHILTON: ROAL AGAIN

World Touring Car Championship race winner Tom Chilton will remain with ROAL Motorsport for a second season in 2015. The Briton begins his test programme this week with the squad's RML-built Chevrolet Cruze.

WTR LOSES DAYTONA THIRD

Wayne Taylor Racing has lost its third-place finish in last month's Daytona 24 Hours United SportsCar Championship opener.

The team's Dallara-Chevrolet Corvette DP, shared by Jordan and Ricky Taylor and Max Angelelli, has been put to the back of the Prototype-class classification

for a drive-time infringement. Jordan Taylor spent more than the four hours allowed in any six-hour period behind the wheel in the last quarter of the race.

USC sanctioning body IMSA has not released an exact time for the infringement, but it is understood to be approximately 17 minutes.



King secures GP2 graduation

British Formula 3 contender Jordan King has joined Racing Engineering for his step up to the GP2 Series this season.

King, 20, won the 2013 British F3 title and was a podium finisher in the European championship last season. He tested with Arden and MP Motorsport in the Abu Dhabi test but selected Racing Engineering because "it's an ultra-successful team whose sole focus is on GP2".

Formula Renault 3.5 ace Norman Nato is another to have joined the GP2 grid. The 22-year-old Frenchman, who won FR3.5 races in Monaco and at the Hungaroring, will line up with Arden International.



Ligier enters LMP3 with Onroak

French constructor Onroak Automotive has given the green light to a new Ligier-badged LMP3 contender. The Nissan-powered JSP3, with aero inspired by the Ligier JSP2 LMP2, will be available in September.

SARD MAKES INTERNATIONAL RETURN



The Japanese SARD team, which finished second at the Le Mans 24 Hours in 1994, is set to return to the international arena in conjunction with European Le Mans Series team Morand Racing for an LMP2 campaign in the World Endurance Championship.

Team SARD-Morand has made two full-season entries for the 2015 WEC with

a pair of Morgan LMP2 EVOs, which will be powered by SARD-badged 3.6-litre Judd/BMW V8s.

Drivers announced so far are team regular Christian Klien, reigning ELMS champion Oliver Webb (left), Super Formula racer Koki Saga and 2013 ELMS title winner Pierre Ragues.

Spruce McLaren's new Honda start

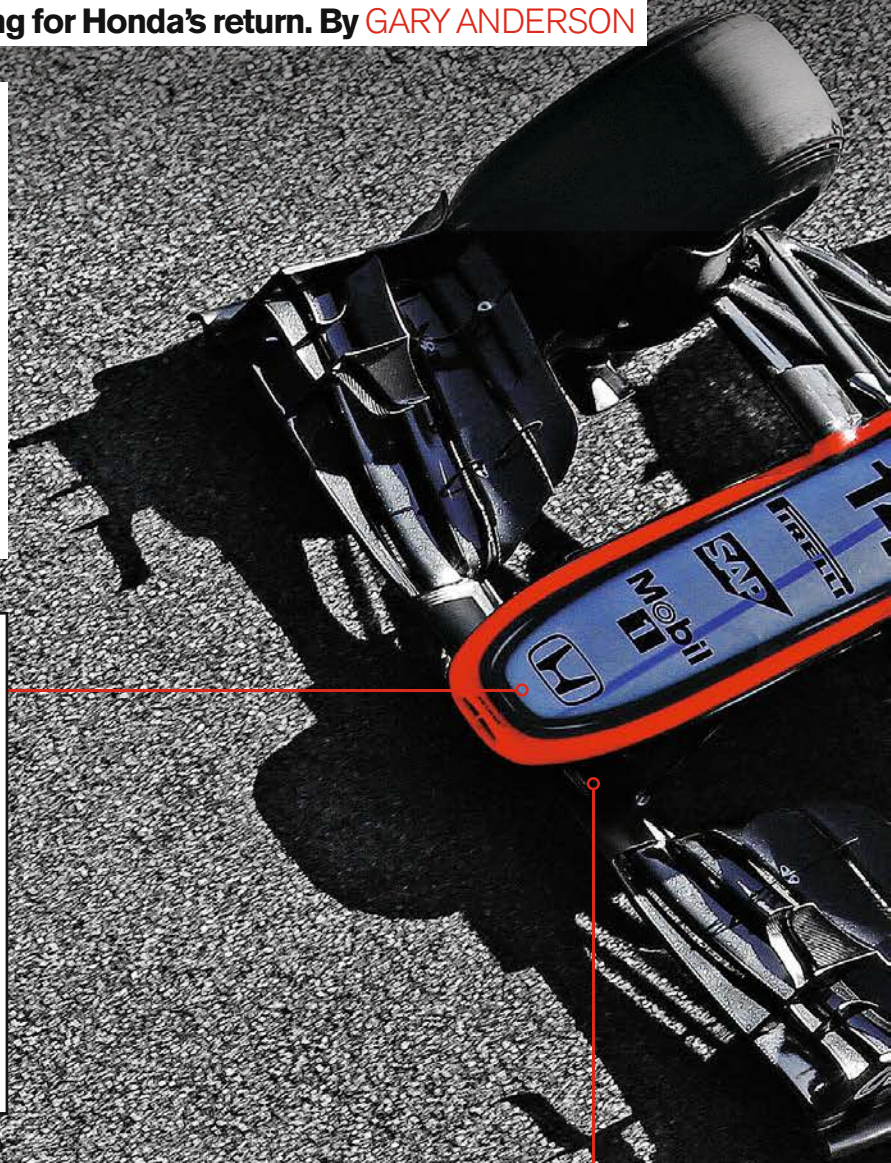
It looks like progress has been made in Woking for Honda's return. By **GARY ANDERSON**

McLaren-Honda MP4-30

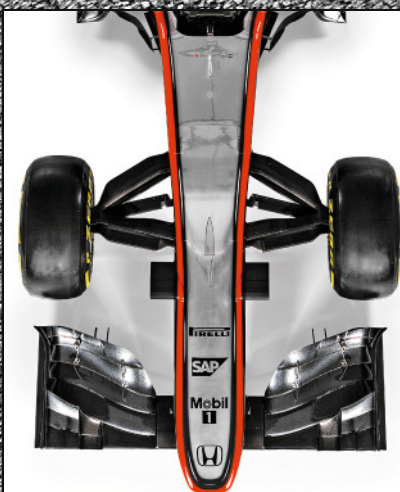
McLaren is now back to where it has wanted to be since losing Mercedes as its works partner. Thanks to its Honda deal, the squad can now be classified as a factory team along with Mercedes, Ferrari and Red Bull.

I was very surprised with a comment that team principal Eric Boullier made last week when he said the team's new head of aero, Peter Prodromou, had been able to point out that McLaren had concentrated far too much on 'peaky' downforce in the past few years. This explains why McLaren ran with the rear-suspension blockers last year and the fact that, in 2012 and '13, the car ran with only a three-element front wing.

This gives more downforce but more problems with airflow separation. A team of McLaren's standing should not need an aerodynamicist coming in from another team to point this out.



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NOSE

The nose is a fairly simple interpretation of the regulations. It continues forward more or less the width of the chassis at the front bulkhead until the leading edge of the front-wing central section. The undersurface rises up fairly steeply, creating a larger column at the trailing edge of this part of the wing. This expansion will work the centre section of the front wing, creating a small amount of downforce from this mandated neutral section.

FRONT WING

This is a multi-element device heavily influenced by last year's Red Bull package. By having more elements, the downforce produced will be slightly reduced but will be much more consistent and driver-friendly.



WING PILLARS

The front-wing pillars are very twisted and start right at the trailing edge of the centre part of the wing. This will entice airflow into the centre of the car under the chassis. The bargeboards at the leading edge of the sidepods will pull that airflow back out again across the leading edge of the underfloor. This all helps the airflow that's coming off the trailing edge of the front wing to come around the inside of the front tyres, minimising the blockage created by them.

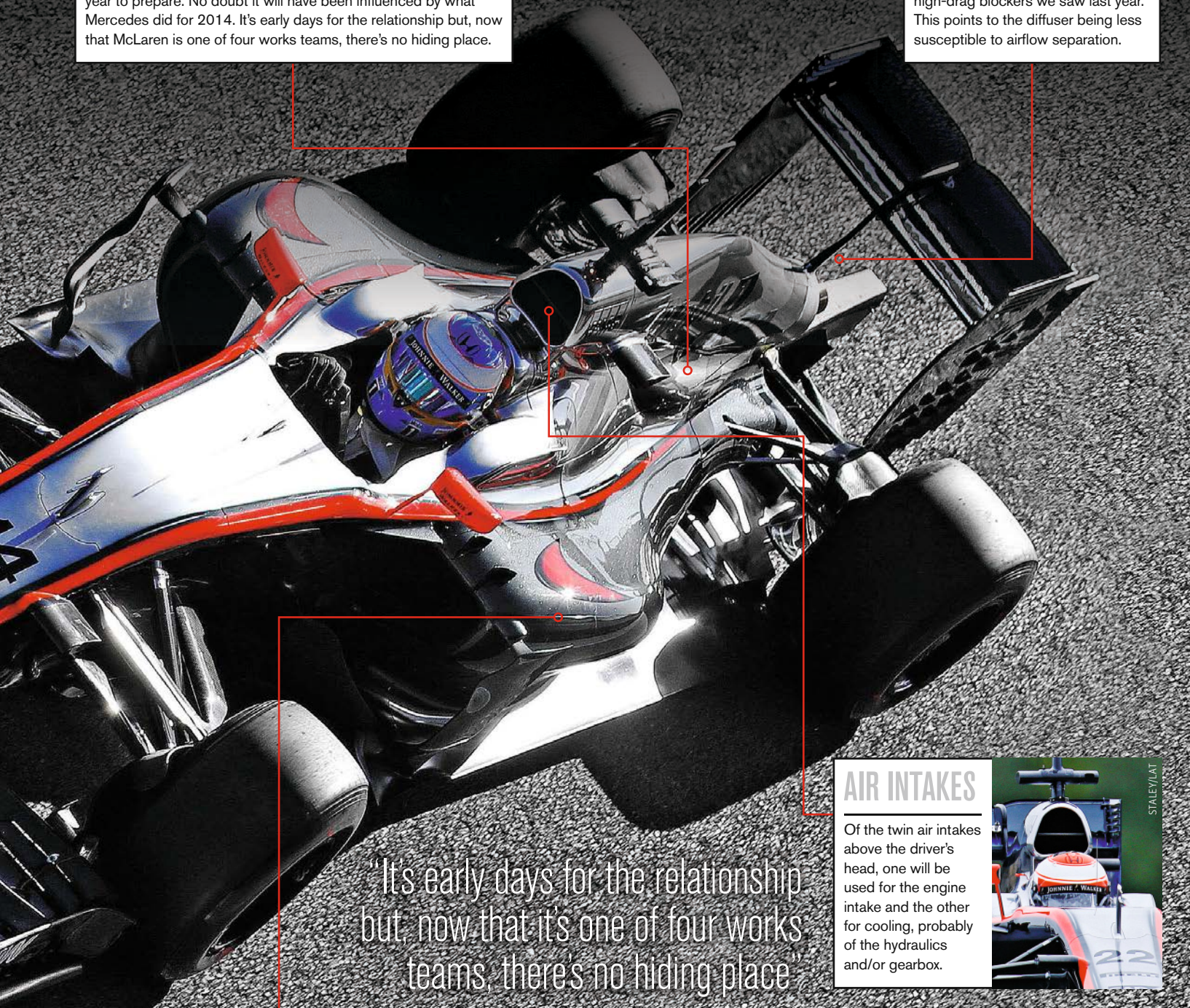
MAIN IMAGE: TEE/LAT

ENGINE PACKAGING

The new McLaren is very neat and tidy, much more compact than the 2014 version. Honda will have played a big role in the packaging of the engine components thanks to having an extra year to prepare. No doubt it will have been influenced by what Mercedes did for 2014. It's early days for the relationship but, now that McLaren is one of four works teams, there's no hiding place.

REAR END

The rear of the car has a single, centrally mounted, rear wing. The rear suspension has no trace of the high-drag blockers we saw last year. This points to the diffuser being less susceptible to airflow separation.



"It's early days for the relationship but, now that it's one of four works teams, there's no hiding place"

AIR INTAKES

Of the twin air intakes above the driver's head, one will be used for the engine intake and the other for cooling, probably of the hydraulics and/or gearbox.



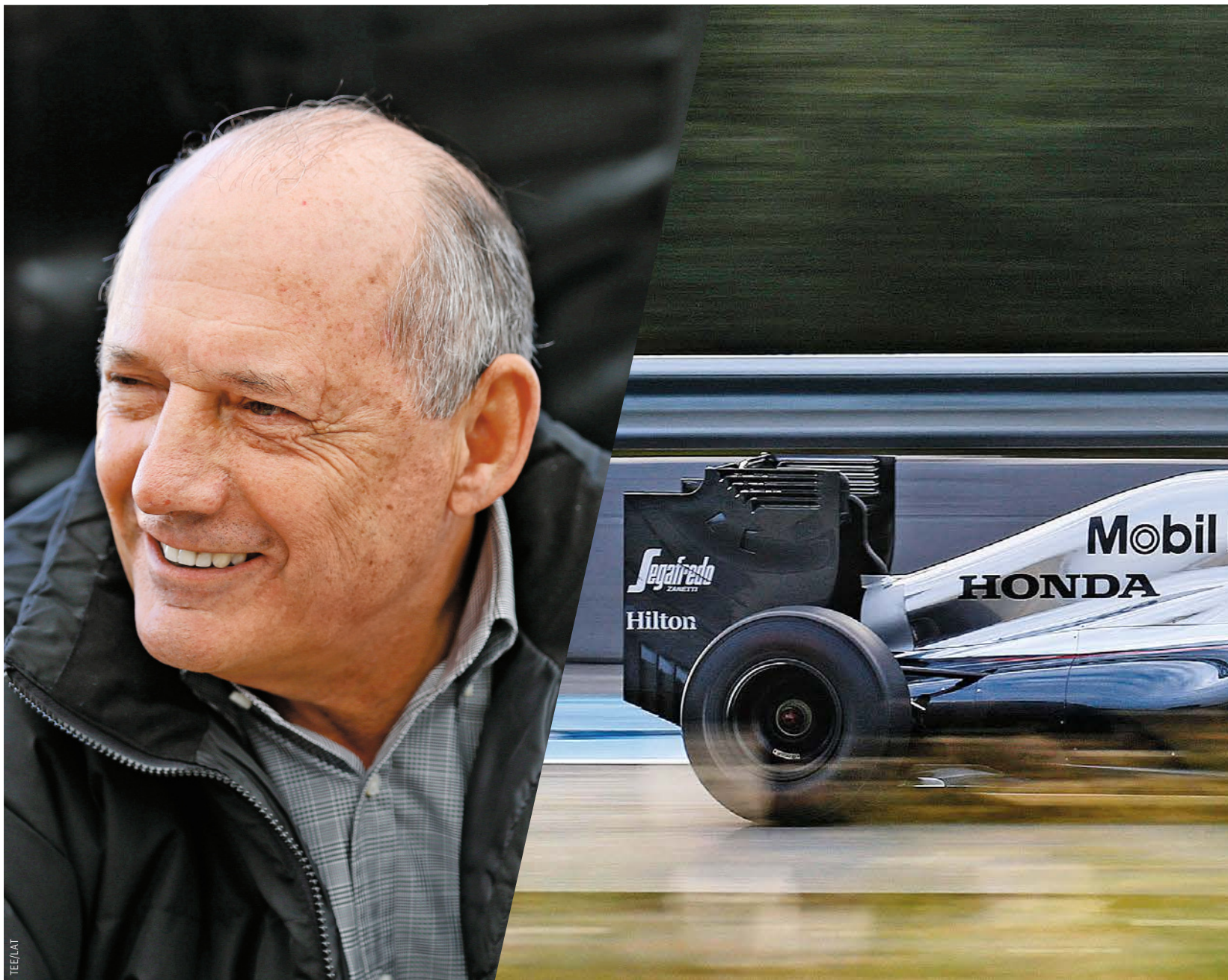
STALEVILAT

SIDPODS

The sidepods sweep in earlier and tighter than before. Getting the airflow in and around the inside of the rear tyre helps with the performance of the rear wing and diffuser. Once Honda gets up and running (which may take some time) and finds out what the circuit cooling requirements are actually going to be, there may be some development in this area. The sidepod exits are less bulky than last year, but again this could change when the cooling requirement is defined.

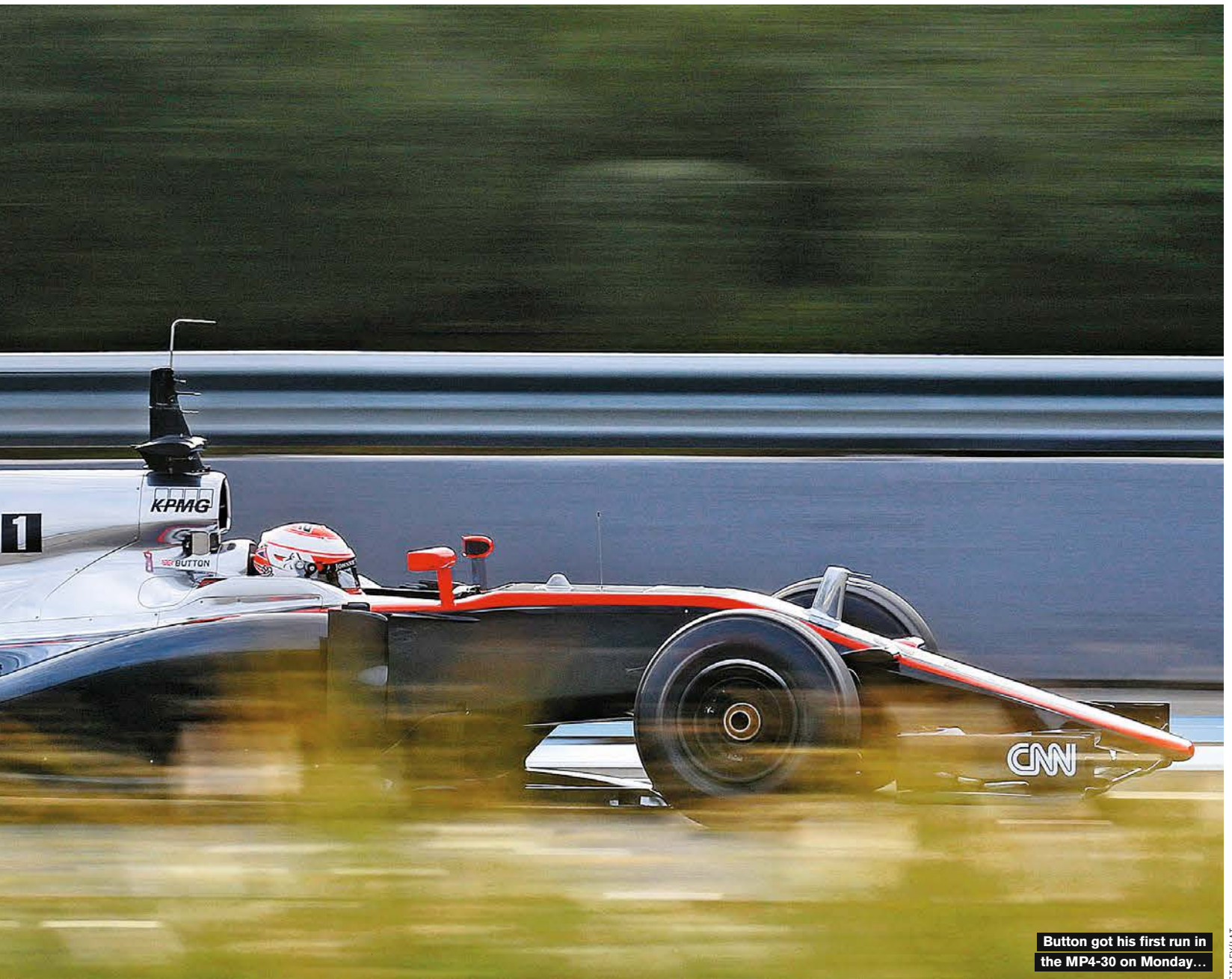


DUNBAR/FAP



“We have to be a bit patient to get up to speed and get it all working”

Ron Dennis isn't talking about the new McLaren; he's referring to the whole relationship with Honda as the parties reunite after 22 years apart. **JONATHAN NOBLE** finds out how the remarriage is progressing



Button got his first run in the MP4-30 on Monday...

STALEY/LAT

No one at McLaren has been under any illusions about the size of the challenge ahead in making its new relationship with Honda a winning partnership.

But even if there is realism about the scale of the summit the team must target, early Jerez testing forced a bit of a rethink about how long it may take to get there. Even hitting base camp would have been a reason to celebrate earlier this week.

Fernando Alonso's tally of six laps on the opening day, with Jenson Button adding just six more on the second, showed that there remains a heap of work to do before McLaren-Honda can even start dreaming of getting up there on the podium, winning races or delivering the titles it's aiming for. Yet despite the frustrations experienced in the garage as numerous glitches on sensors and power-unit components stymied efforts to get the show on the road, the mood among team members remained serene.

Button himself said that what had happened this week was ultimately no more or no less than anyone had been expecting. "I didn't think we'd pound round for lap after lap," he said after the second day of the test. "Even the car that won the



...and the veteran Brit was expecting teething trouble

very early days in the Honda relationship, but also the reliability dramas were claimed to be part of an inevitable consequence of the team having focused on improving performance at all costs.

"It's strange to say that we feel good," he said. "But we are further ahead on everything we have done: building parts, sailing through crash tests so your momentum isn't slowed down, getting the aero figures that you targeted, and getting the performance on the dyno. It makes us feel comfortable that we won't be uncompetitive with the performance base of our engine. All of those things make you feel good — so what we have got to do is make them work in a dynamic way and get better communication between us and Honda."

What is clear is that, in a bid to make up for the fact that Honda is coming at the new turbo rules one year behind the opposition, McLaren has had to push development of its packaging to the extreme in a bid to try to close the gap to Mercedes. The end product is a car that Dennis refers to as 'size zero' because of some pretty extreme concepts around its rear end, and some unique technology inside it.

"If you're behind in any sport, catching requires you to accelerate faster than they're running, ▶

world championship last year had a great day on the first day, but had a problem on the second.

"I don't think Honda's power unit is greatly different from last year and they still have issues, so I didn't expect us to do a massive amount of laps. You come into the first test thinking you're going to have issues and you're going to solve them. That's what testing is all about."

Team chief Ron Dennis was equally far from downbeat about progress. Not only is this still



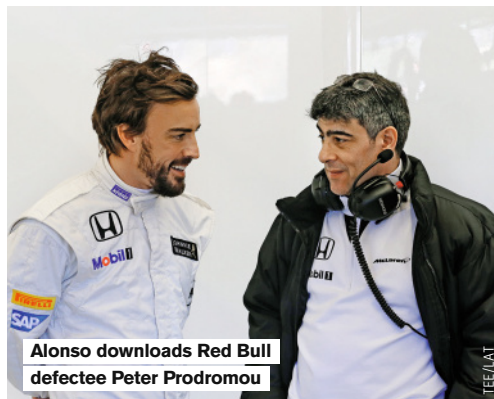
Alonso's return to McLaren has created a great deal of interest

DUNBAR/LAT



Racing director Boullier is confident of a strong start

TEE/LAT



Alonso downloads Red Bull defector Peter Prodromou

TEE/LAT



Honda's Yasuhiro Arai is in F1 for the long haul

TEE/LAT



Alonso's early running was shortlived, but improved later

“Decisions take three times longer, as we start to interface with people who've been doing their own thing”

McLAREN BOSS RON DENNIS

► otherwise you won't catch them up," he says. "Have we taken some calculated technical risks? Yes. These relate to technologies that we are the first to deploy – and we will work hard to get performance advantages.

"It probably won't even be Australia [the first grand prix] before we know how we're doing. I expect two or three races before we really get the lie of the land. We'll try through the remaining tests, especially the next two, to take away the consequences of this densely packaged concept."

The old F1 cliché that it's easier to make a fast car reliable than make a reliable car fast still rings true, especially with engine manufacturers able to make changes to their power units in the event of reliability problems. That has probably further encouraged Honda to be willing to embrace an element of risk on the engine front if it allows some extra performance.

As racing director Eric Boullier says: "We just want to win, so we have to be better than the best, which last year was Mercedes. It was the aim of McLaren-Honda to be as brave as possible so we can close the gap as soon as possible. [Honda] came up with some good technical solutions that maybe bring some reliability

issues, but they have the people, the resources, the technology, so they can match [Mercedes]."

Of course, getting to that point of being able to deliver the maximum will still likely result in some pain. That may mean a bit more fire-fighting in the short term, even though the programme has already mapped out targets and objectives for the next few weeks.

For the next test at Barcelona there should be another development step of engine, before the final Melbourne power unit – the one that will be homologated with the FIA on February 28 – runs at the final Barcelona test. By then, Honda should also have an idea of how many development tokens it will be able to use over the course of the season to bring about further improvements. More time will also allow McLaren and its new Japanese partner to work through the cultural and language differences.

One amusing example of how things can get lost in translation was when Honda motorsport chief Yasuhiro Arai was summing up how committed his company was to staying in F1 for the longer term. "I want to stay... I want to be the Village People of F1," he said. The reference was, of course, more about becoming a native part of

F1 racing than anything to do with the YMCA!

Dennis says that getting communication flow with Honda working has slowed progress in the short term, hopefully for long-term gain. "We're trying to think a lot, instead of just jumping on a problem," he says. "The cultural differences between us mean we have to take our time to make sure we are communicating correctly, which is challenging. We have to make sure we take the right decisions, so probably every decision at the moment takes three times longer, as we start to interface with people who have formerly been in Japan doing their own thing.

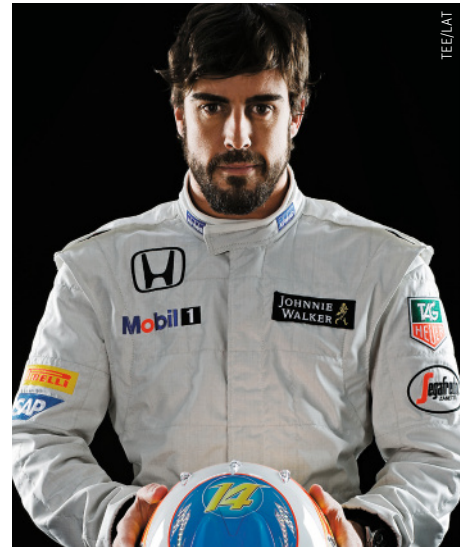
"Their team is very new, and their English is multiples better than our Japanese. You can't be critical because they are not communicating perfectly with us, so we have to be a bit patient to get up to speed and get it all working."

Rewind 12 months and the lesson of Red Bull's and Renault's troubled first 2014 outing was that testing doesn't always offer an accurate forecast of the year ahead. By the first race, the team had overcome the reliability dramas and Daniel Ricciardo stood on the podium as Mercedes' main challenger (although he was later excluded).

Dennis believes that Honda is in good shape to



Q&A



TEE/LAT

FERNANDO ALONSO

McLAREN DRIVER

After his first day in the car on Sunday

What memories do you have of the first McLaren-Honda era?

Unfortunately in Spain we didn't have Formula 1 coverage on TV. So I remember the news, and the politics in Japan with the crashes and with the title deciders. Obviously I followed Ayrton [Senna] at the time, so I had a lot of replica cars that my parents gave to me. I had a big photo in my room of Ayrton and the McLaren. That's what I remember from that time.

What do you think of the approach Honda has?

I see a lot of potential and I'm delighted to work with the Honda guys. I saw from the first day how passionate they are about motor racing in general. It's not just the Formula 1 project. The way they live and they think is just a culture that I'm a big fan of. They carry that experience into their life, their work and motor racing passion. I know that before long we will deliver what we want to do. I really think that if Honda wants to do something, they will achieve it.

Was the challenging first day in the car as expected?

I think it more or less went as expected. Obviously it was a slow start, as we knew it would be. We saw last year how difficult it was for all the teams to complete laps, especially the first couple of laps.

What do you think of the car?

The car design is quite extreme, quite aggressive and quite innovative, so we definitely have something to discover there. I would like to do more laps, that's for sure, because after a long wait of two months for testing, six laps is not enough.

How different is McLaren now compared with when you left?

It's more open now. I'm different as well. I was 25 years old when I joined McLaren first time. I think now is the perfect time to rejoin because we share some goals.

make a stronger recovery than Renault did last year. "It's different," he claims. "The maturity of the Mercedes-Benz programme at the first test, I think, reflected the fact that they were going to have to supply four teams at the first GP. What they did was extremely impressive.

"I do think that one of the small benefits we've got, although obviously Honda has had less time to develop, is that we have to take two engines to the first GP and not eight. But inevitably if you are focusing on performance first and reliability follows on, then we are all holding our breath that we get to where we want to get to by the first GP."

Indeed, Boullier is adamant that we can ignore what we saw at Jerez, and that McLaren will deliver a competitive performance in Australia.

"We have been quite extreme with packaging our car, and every technical solution that we've brought to the car is something we believe will help us to close the gap to Mercedes quickly," he says. "Being brave and ambitious means that we're not reliable, and we're struggling with electrical issues, which are quite difficult to fix. But they are fixable.

"Starting two years after the other [manufacturers], we have a lot to catch up.

We will see the best of the package for this year in Australia, and then depending on how much can be done to the engine in the season we can maybe expect some improvement later. But I think the engine in Australia will be ready to give us a good result, considering what [Honda] have been throwing at it in terms of resources in the short time they have had to prepare them."

It's progress that is essential if McLaren is going to make the most of its capture of Fernando Alonso, and not see its season overshadowed by the kind of frustrations experienced in Spain. Alonso remains fully committed to the cause — for now. When asked how easy it will be for him to cope with struggles when he is used to running at the front, he was unfazed. "I think my patience was proved for the last five years," he smiled, in clear reference to Ferrari. "I have no problem..."

But it's pretty easy to keep it positive after just one difficult day in a car. Will he still feel like that if all that was promised for the start of the season doesn't materialise?

Alonso has not joined McLaren to be wasting time at base camp. Onwards and upwards is all he wants and cares about. Honda must deliver — all the way to the top of F1's peak. ❧

A new start in Maranello

It's got new management and a four-time champion on the driving strength after a turbulent winter behind the scenes.

But **GARY ANDERSON** isn't convinced about the new car

FERRARI SF15-T

Ferrari has made some big changes over the winter, from the top to the bottom. There's been a big clear-out and, while it wasn't necessarily the case that those who have left were bad, they perhaps weren't in the ideal positions. The question is whether Ferrari's new structure will be successful.

Sebastian Vettel has joined, with Fernando Alonso moving on. It will be interesting to see

how this changes things inside the team. Alonso is a fantastic driver on a Sunday, but he can be a bit political so there could be a very different atmosphere in the team.

I suspect Ferrari will have a better season than last year, but I'm not seeing anything in this car to say that it's a dramatic step forward. There's nothing on the car as we've seen it so far to get too excited about.



NOSE

I didn't like Ferrari's nose concept last year because it directed airflow over the top towards the sidepods, and that creates lift. While that may potentially create more downforce in one area, the lift negates that. Maybe Ferrari isn't taking that into account. You don't just have positives in isolation – it's like if you make a bigger combustion chamber in an engine, you get more power, but you use more fuel and carry more weight. Aerodynamics are the same – you can try to increase downforce or reduce the lift. The front of the Ferrari must be a result of the windtunnel research, but I'm not sure it properly correlates with the track. Ferrari does have the anteater, but it's not the best interpretation either visually or for the airflow going around it because they're making it work too hard. It looks different to last year, but the idea is the same.



RAIKKONEN-FRIENDLY FRONT END?

Ferrari has said that the car will suit Kimi Raikkonen better, but I'm not sure why. He needs good front-end feel but I don't see anything in the suspension design or front end that will transform that for him. He needs a car that is consistent from lap to lap. We'll have to see what happens as he gets used to the car.



ENGINE

The Ferrari power unit will be better, but looking at the packaging demands it doesn't look like a massive change. The upgrades should make it possible to close the gap and the drive provided by having Vettel will help. But it was the weakest engine last year and it would be ambitious to think it could suddenly be at Mercedes' level.



REAR PACKAGING

The Ferrari always looks a bit too bulbous, as if the lines you ideally want have been compromised with little bulges to fit everything in. If you compare it to the McLaren, it's much less tight. The sidepods are bigger as there's a greater cooling demand, and we've often seen different radiator configurations from Ferrari.



SIDEPODS

The sidepod of the Ferrari is a big lump – it doesn't look like it's designed with aerodynamics in mind, more just to package what's in it. I don't see the aerodynamic detail in this area that's required to match the strongest teams. If you look around the UPS logo, there isn't a defined transition from the top surface to the vertical section – it doesn't look tidy. It looks more like it's been vacuum-packed around an existing shape.



REAR WING

The rear-wing endplates are quite complicated now. There are lots of louvres at different levels. What Ferrari is trying to achieve here is to make the endplates more 'three-dimensional'. You're taking the airflow to try to create a better aerodynamic surface than a flat endplate gives you. This is quite good detail and should optimise the airflow and make it more consistent. Vettel is a driver who has always been very interested technically, so maybe he has brought some basic ideas with him from Red Bull.

Q&A



JAMES ALLISON
TECHNICAL DIRECTOR

Was the aim to amend the errors of last year or can we see some innovations?

All F1 cars are trying to do the same thing: put as much power down on the road as possible and have a high level of downforce – not just absolute peak downforce, but through the whole range of conditions on track. Then, you need a suspension characteristic that allows the right compromise between the suppleness of the suspension over the road and the support of the aerodynamic platform.

The car looks more slender than last year's. Is that a result of the new regulations or some repackaging?

The back of the car is noticeably different from the 2014 car. We've been successful in pulling the bodywork much tighter to the stuff underneath the skin.

What changes have been made to the power unit?

We had a number of issues with last year's engine. Early on, the power delivery was not particularly sophisticated. It improved a lot during the season, but we've taken that a step forward. The amount of electrical energy that we were able to recover from the engine was not really good enough during the race. We've changed the architecture of the engine to make it a better compromise between qualifying and the race. Then, it's pure, simple horsepower.



VETTEL'S FIRST DAY AT FERRARI



Sebastian Vettel had his first proper day as a Scuderia Ferrari driver at Jerez last Sunday. **BEN ANDERSON** was there to watch his progress

Could you call it a dream start? Yes, you could, for Sebastian Vettel's mission as a Ferrari driver is to replicate his hero Michael Schumacher's feats and return the Scuderia to the front of Formula 1. Certainly testing counts for little in the grand scheme of things, but setting the pace during your first official run with a new team is no bad way to kick a new partnership off.

Of course, it's foolish to read too much into lap times so soon in the season, influenced as they are by incomparable fuel loads and variable testing programmes across the different teams. But a driver will have a fair idea straight away whether his new steed is something he can learn to love, or a complete dog that he would rather send to the home. In this regard, Vettel must surely feel encouraged.

Ferrari tried to manage expectations in the wake of this performance by pointing to the fact that Kimi Raikkonen set the fastest time on day one of pre-season testing last year – and we all know how shaky the foundations of that achievement turned out to be. But, as the ex-Red Bull driver himself said: "Surely it's better to be closer to the front rather than a long way behind."

Vettel wasn't giving much away when he spoke about his first experiences of Ferrari's latest design – the first built fully under the leadership of ex-Lotus technical director James Allison –



Jerez was Vettel's first taste of new Ferrari

"For day one we can be reasonably happy. What we did felt good as a starting point" SEBASTIAN VETTEL

but he looked content, happy even. There were plenty of times during Vettel's swansong with Red Bull when you couldn't say that...

"I haven't driven the 2014 Ferrari, but I think as a starting point it was a good day," he told reporters after completing 60 laps and getting his first taste of contemporary Ferrari machinery in F1. "We did have some problems with telemetry, but that's why when the car is new you come back in, you check, you take it apart, and these things take time. It would have been nice to do more laps but overall we can be quite happy."

Having finally broken away from the Red Bull mould, after spending most of his F1 career in Milton Keynes, Vettel now has the chance to experience how another top team operates. His first official laps as a Ferrari driver also gave him the opportunity to compare the SF15-T with the

Red Bull RB10 that usually left the Scuderia trailing in its wake in 2014.

"Obviously there are a lot of things that are different: the steering-wheel layout, the steering wheel itself, the strategies. In the end all the buttons probably do the same or similar things, but it does take some time to get used to," Vettel explained. "Of course the car feels different – it's a different philosophy behind it and it's made by different people. But fortunately I could use the time in the winter to make sure I feel comfortable. I could really focus on the car."

"The first impression was quite good. Obviously it's difficult to say at this stage, but for day one I think we can be reasonably happy. We didn't run a lot, but what we did felt good as a starting point. More I cannot say and I don't want to say, because it's way too early for that." ▶



Learning different wheel layout was an early job

PRICE/XPB IMAGES



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Last year Vettel looked unhappy...



...now it's all smiles with Ferrari

PICS: THOMPSON/GETTY

“Starting off this year is a different story – a new challenge, new team, and I feel motivated” SEBASTIAN VETTEL

► Compared with Mercedes, both Ferrari and Red Bull’s engine partner Renault made a pig’s ear of their first attempts at building a V6 turbo hybrid engine. Red Bull estimates it was racing with a 60bhp deficit to Mercedes last season (despite possessing perhaps the best kinetic energy recovery system in the field), while Ferrari’s engine was overweight and so slow in 2014 that it cost its architect his job, followed by many other senior Ferrari staff.

When asked to compare his new Prancing Horse with his last year’s mount, Vettel remained diplomatic. “It would not be fair to share,” he said carefully. “In the past I was in a similar position the other way around: I came from a Ferrari engine to a Renault engine in 2009 [when he moved from Toro Rosso to Red Bull]. Obviously there are quite a lot of things different, but I don’t think it would be fair to share these because both parties are trying to do their best.”

Many churlishly wrote Vettel off after a 2014 season in which he was comfortably defeated by Red Bull rising star Daniel Ricciardo. His previous team boss Christian Horner revealed ahead of the Jerez test that Vettel had lost a bit of his love for F1 amid massive regulation changes, a car he didn’t enjoy driving (or like the sound

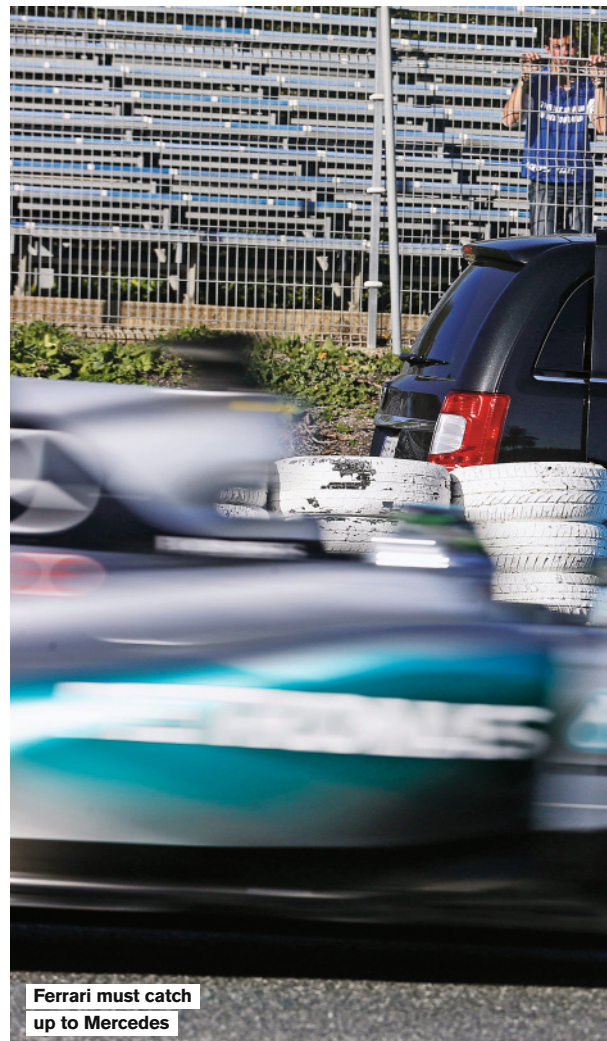
of), and a team-mate who could put him under pressure consistently.

Vettel himself certainly didn’t appear to be at his best last year. Much was made of his struggles to adapt to this new generation of F1 car, having grown used to Adrian Newey’s design genius moulding heaps of exhaust-blown downforce around Vettel’s capacity to pick up the throttle way earlier than should be logically possible.

Vettel was known during his time at Red Bull for his ability to adapt, to use a voracious work ethic in leaving no stone unturned in search of extra performance. But when the rules changed so did Vettel’s world. Engine characteristics changed massively, downforce levels dropped, the tyres became harder, and expanded energy recovery systems interfered more with braking stability (certainly on Renault-powered cars).

Suddenly, Vettel found that the “tricks” he had used to dominate the sport to such great effect were no longer effective. He could no longer drive an F1 car the way he instinctively wanted to. He looked a bit lost. He looked miserable.

But you don’t win one Formula 1 World Championship by accident, let alone four, and those who underestimate the transformative power of a fresh challenge and a fresh



Ferrari must catch up to Mercedes

environment on a world-class driver do so at their peril. The same goes for the team, which can grow stale built around the same structure for too long. Ferrari has swept a new broom (some might say swung the axe) right through its F1 squad over the winter. The president has changed, the team principal has changed, senior engineering staff held accountable for Ferrari’s first winless F1 season since 1993 have been moved on. This change could be just what both Ferrari and Vettel need.

“Last year was a difficult year and there was plenty of work – therefore, you might not have as much time to laugh and joke around as usual,” explained Vettel. “Generally, if there’s nothing to celebrate I can’t be the happiest person. But starting off this year is a different story – a new challenge, a new team, everything is new, and I feel very motivated.”

“But I’m not sitting here and saying last year I was down and therefore wasn’t performing; I was giving everything I had and surely it wasn’t enough, but that’s why you keep coming back and trying again. Obviously it’s a big change [coming to Ferrari], but so far it keeps getting better. I used the time during the winter to go to Maranello a couple of times. From what I’ve seen it’s really impressive. The potential is huge.”

“Obviously there is a lot to do, but it’s a big time of change – a lot of people leaving, a lot of people coming, and a lot of people getting promoted into different places. So it will take time, but I think definitely motivation is high – not just with me, I think with all the team.”

“I’m quite happy where I am and definitely the feeling is different. I don’t regret any time I had at



Vettel struggled to make an impact in the 2014 season

BATCHLOR/AP/IMAGES



STALEY/LAT

FERRARI'S ANSWER TO ADRIAN NEWEY

Although Ferrari has invested its faith (and considerable sums of money) in Sebastian Vettel's driving talent to haul it back to the front of the grid, the Scuderia's hopes rest just as heavily on the engineering talents of a quiet Brit who will remain largely out of the limelight.

James Allison joined Ferrari at the end of 2013, so his impact on last year's F1 T was limited. This year's Ferrari is the first to have Allison's full input, and the Scuderia will be hoping that the man who masterminded the Lotus team's return to winning ways in 2012-13 can perform the same transformative magic in Maranello.

Comprehensive engine changes have featured in Ferrari's winter efforts, and Allison believes its race form will no longer be compromised by poor energy recovery. "A definite weakness of last year's car was that the amount of electrical energy that we were able to recover from the turbo was not really good enough for producing competitive power levels during the race," Allison explains. "It was one of the reasons Ferrari's qualifying performance was relatively stronger than race performance last year. We have tried to change the architecture of the engine to make it a better compromise between qualifying and racing performance."

Calling the pace difference between Ferrari and Mercedes in 2014 "unacceptably large", Allison says a lot of effort has also gone into aerodynamics. The rear of the car is much more tightly packaged, and there has been considerable work on improving cooling efficiency.

"That has been done through a lot of work, not just in the windtunnel, but also in the design part of the company to try to find radiator designs that were fundamentally more efficient," Allison adds. "So for every square centimetre of radiator, we were able to extract more cooling than last year and therefore able to close the car down at the back as a consequence."

Ferrari already looks faster than it did in 2014. When racing gets under way in March, we will begin to learn whether Allison really has begun to weave his winning spell on F1's oldest and proudest team.

Vettel was fastest on day one of the Jerez test



DUNBAR/LAT

Red Bull. I had a very, very good relationship with the people there, but I think – to sum it up – Ferrari is something special."

Ferrari is indeed something special. Its former star driver Fernando Alonso (now wrestling with the teething troubles of the ambitious new McLaren-Honda project) admitted as much after his last race for the Scuderia in Abu Dhabi last year, when he said closing the door on that chapter of his career was "very difficult".

The hope for both Vettel and Ferrari is that their relationship will turn into something special too. It will surely take time, though, because of the relentlessness of the current Mercedes operation. Vettel set the pace in the early stages of pre-season testing, but Mercedes by far racked up the largest number of laps, something Vettel clearly felt was more significant.

"I think in terms of laps there's still a lot of improvement we can do," he said. "The reference is still Mercedes – they did 150 to 200 laps on the first day, so they've proven they start off with

a very reliable car. Hopefully not as quick as last year – I think that's what everyone is hoping for! But you have to give fair credit to them – they're doing a very good job. It will be a surprise if they're not as strong as they were last year."

It is essential that Ferrari is able to challenge Mercedes this season, because its new management has set an ambitious target of winning "at least" two races in 2015. Given it could barely manage two podiums last year that looks a tall order, but Vettel is committed to delivering on that promise.

"I think we would be happy with that," he said of the ambition. "But of course we would be happy if we win more. We have to be realistic. There is a lot of change that's happened over the winter, so I think the most important thing is we start getting into the groove quickly in winter testing and then we start to make progress.

"If the situation is like last year, it will be very difficult to fight for victory. But that's our goal; we're not here to finish second." ❧

Back in the hunt in 'privateer' fight

This could be the car that propels Lotus back into the non-works scrap, thinks **GARY ANDERSON**



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LOTUS-MERCEDES E23

Lotus had a terrible season last year, but it had very strong years in 2012 and '13 and this car looks to be a step back in the right direction. Before last year a lot of people left and, while there were still good people at Enstone, it has clearly taken time to regroup. This appears to have been done effectively – the evidence of that is in the improved car this year.

With the switch from Renault to Mercedes engines, there's a good chance for Lotus to get itself back to the front of the battle of the non-works teams. The battle for fourth, fifth and sixth in the constructors' championship could be mighty and there's every reason why Lotus could be in the thick of it.

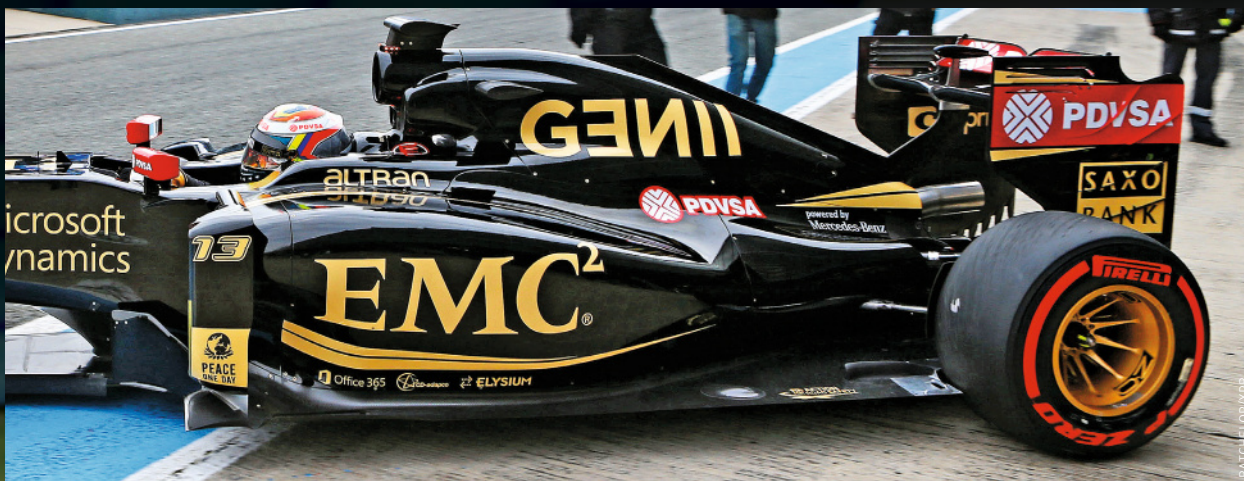
The detail work is much more impressive than on last year's car. So while it will be difficult to get back to 2012-13 levels, I expect Lotus to have a much stronger season.



COOLING

There are two inlets in the headrest area, one on each side. The main one is for the engine, and the side one will be for cooling.

MAIN IMAGE: CHARNIAUX/XPB



REAR PACKAGING

The Coke-bottle area is fairly conventional, with the radiator exits swept back. The sidepods drop away quite quickly and this looks a big step forward from last year. The twin-tusk 2014 car wasn't in the game in terms of optimising the packaging, so this is a good step.

BATCHLOR/XPR

SIDEPOD

The vertical turning vane behind the front tyre on the leading edge of the sidepods appears to be a little further forward than other cars. This means it's more of a 'standalone' component, able to tidy the airflow off the front tyre and make the sidepods work better.

FRONT SUSPENSION

Lotus still has very angled wishbones, so the car will be sacrificing some tyre grip. I put a big emphasis on suspension geometry and in my years I've never seen it as detrimental to work the tyres well, but obviously there can be an aerodynamic compromise. I'm not convinced Lotus has got the balance between aero and mechanical grip right.



FRONT-WING ENDPLATES

The endplate design is refined to turn the airflow down towards the contact patch. This is to try to join up the low pressure behind the rotating wheel, which sucks the air around the tyre, to make the endplate more efficient. It's a nice detail.

NOSE

The Lotus nose is very conventional, similar to the Mercedes. Lotus has taken the narrower route, and it meets the regulations well without being too clever. But because there's such a small window in which to work with the nose, the difference between different approaches will be minimal. You're better off doing something simple and effective that passes the crash test, and then concentrating your resources on other areas. The nose is very flat-topped, which I'm a believer in because when you accelerate the airflow coming off the top surface you create lift (see Ferrari). So Lotus minimises the negative forces on the top of the car.



DUNBAR/LAT

FRONT-WING MAIN PLANE

The transition from the FIA-mandated neutral central section to the outboard end is very decent. Lotus isn't setting up too big a vortex, which is good because, while a vortex is beneficial here, it won't work when there is too much turbulence. So this should be consistent on the E23.

CAN LOTUS DO A WILLIAMS?

The Enstone team switches from troublesome Renault to pacesetter Mercedes engines for 2015. **BEN ANDERSON** asks if it can match the German firm's top customer squad

What goes up must come down. This is as true in grand prix racing as it is in life. Lotus suffered a spectacular fall from grace last year, recording its worst finish in the constructors' championship (eighth) since 2009, when 'Team Enstone' was still the Renault works squad. By contrast, Mercedes-powered Williams rose like a phoenix from the flames to beat Ferrari to third spot in the title race, its best season since it finished runner-up to the Scuderia way back in 2003.

Lotus has ended a 20-year association with Renault to join Williams in running Mercedes engines this season. The Three-Pointed Star produced comfortably the strongest power unit for the first year of F1's new V6 turbo hybrid regulations. Now that Lotus has the benefit of that (updated) package for 2015 (married to a new design in the E23 that was started early owing to the shortcomings of its twin-tusked predecessor), it is hoping to undergo a similar revival of its own this season.

The target? The big bullseye painted on the back of the Williams FW37...



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Q&A

ALAN PERMANE HEAD OF TRACKSIDE OPERATIONS

AUTOSPORT: What have you learned from your disastrous campaign in 2014?

Alan Permane: We've learned a lot. We didn't have a great year when we did our side exhaust [forward-facing, in 2011], but we learned a lot

about exhaust-blowing and that helped us in the following years. We had a fairly torrid time last winter and we lost quite a lot of people as the aero department was heavily restructured. With any change comes difficulty, but gradually through the year we improved things. There's no doubt that in the last three or four races the car markedly improved. It didn't really improve position-wise, because we had such a big gap. But if you look at the percentages from pole position, we've closed things up. We understood the problems with the car. Some of them we couldn't address but we have addressed for this year's car.

AS: Was it a year of necessary pain for Lotus?

AP: I'm not sure about necessary, it's just a fact that it's what happens when you downsize and lose people who have been there a long time.



ISTITENE/GETTY

Maldonado pushes on in the new Lotus on its first day at Jerez



Maldonado is aiming at Massa and Bottas in 2015

DUNBAR/LAT



HONE/LAT

Williams was usually much further ahead of Lotus than this

With all respect to [current technical director] Nick Chester, James Allison [former technical director] was an absolute team leader. Losing James was a big hit. We lost Dirk de Boer, our head of aerodynamics; we lost our head of CFD – these are all good people. No one is irreplaceable, but it takes time for the replacements to gel. The previous aero department worked together for five or six years and churned out really good stuff – the 2013 car was fantastic. To stop that abruptly upset things. But we have a great windtunnel and a great base at Enstone. There's no reason why we won't get back on the right path.

AS: This team has always risen and fallen in different circumstances, but does it still have its fundamental DNA? ▶



Kimi Raikkonen won the 2013 Australian GP in effective E21

DUNBAR/LAT

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Enstone first paired up with Renault as Benetton in '95

GETTY IMAGES

AP: It's a racing team; we don't do anything else at Enstone. Although we've lost James, it's not like we've got a new person because Nick's been with the team for more than 15 years and everyone knows him well. He's very capable. I absolutely think we've got a strong team.

AS: Will the switch from Renault to Mercedes engines be key to your chances this year?

AP: It was fairly clear early on that Mercedes was the package to have and, when McLaren chose Honda, certainly my first reaction was, "Let's go and get that leftover Mercedes." Our owners reacted fantastically and chased that down. It's not been an easy split with Renault – we had a partnership for 20 years and we had just resigned with them. The ultimate thing would have been if Renault had done the class-leading engine and we'd stayed with them, but they haven't. They've made huge steps, but it's still clear the Mercedes is the power unit to have. It's great for Enstone, it shows people we're here for the long-term. We've signed a six-year deal with Mercedes and that helps with recruitment because people can see how serious we are about things.

AS: Lotus is a year behind the other teams with Mercedes engines. Will that be a disadvantage at the start of the year?

AP: I don't think it's a huge thing. We'll have experienced engineers on their side and the regulations are largely the same, so I don't think they'll be doing anything hugely different to what Renault did. It's similar to the way the aero department changed: we'll have new faces to integrate with. But it was the same with Renault – we had completely new people from Viry. Of course there will be advantages and disadvantages, because we've had 20 years with Renault. On the plus side, Mercedes are only half an hour up the road from us [in Brackley]. You don't have to jump on a train or a ferry to go and see them, so that'll be easier. There's nothing there that's scary or creates problems.

AS: Surely your aerodynamic performance will also have to improve significantly this year...

AP: There's no doubt. There are three or four things that make cars quick and one of them is aero. And ours really isn't strong enough. But we're pretty sure we know where we went wrong, and it wasn't something that could be changed on the 2014 car. We have changed it on this year's car and we can already see significant gains in the windtunnel, so we're very confident. While we're not going to say we're going to beat Mercedes and Red Bull – those teams are employing almost double the people we're employing – we're very confident that we'll be regularly back into Q3 and fighting for podiums again. ☞

THE GAP THAT LOTUS HAS TO CLOSE

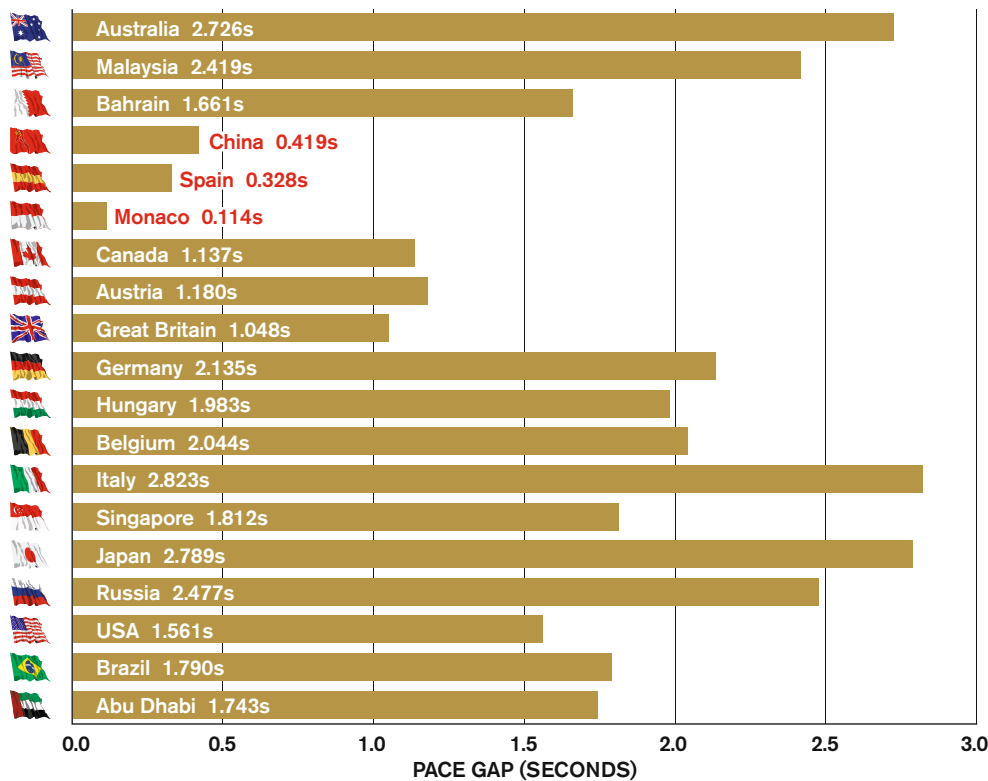
This graph, based on the fastest lap by each team set on every grand prix weekend, shows how the pace gap between Lotus and Williams fluctuated during 2014.

The data reveals that Lotus

closed up substantially over the course of the first five races, but steadily slipped back after failing to introduce significant updates to the E22 after May's Spanish GP, although it did claw back some lost ground

over the final three races.

On average, Lotus has to make up 1.7s per race this year to be on a par with Williams. That's a tall order for even the most resource-rich of outfits, against a moving target.



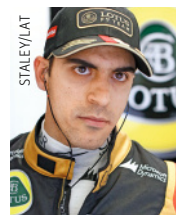
WHAT THE DRIVERS THINK



ROMAIN GROSJEAN

Last year's car was pretty bad. If we go back to 2013, I think we punched higher than we would have done normally. If you removed Red Bull from the last six races, we would have won

almost all of them – and with the budget we have, it would have been extraordinary. Everything we have learned last year will help the team. We started the year knowing our windtunnel numbers were very good, and we thought we were well ahead of some of the teams, then we got to the first test and saw there was something wrong with the car. But at least we know for this year's car what's important. We know we are going to get the best power unit. We've learnt from our mistakes and know that our cooling hasn't been great. I think we still have potential. It's not the same team as from 2005 and 2006, because it's a smaller team, but I think we can produce a car that is capable of reaching the podium and being fourth or fifth in the constructors' championship, and perhaps even fighting with Williams.



PASTOR MALDONADO

We need to work. Nothing comes for free. It's not all down to the engines or all down to the car. I think Red Bull had a wonderful car [last year] and they didn't have the entire

package working. For sure, the Mercedes engine puts you in a very good position, but it's not only the engine. It's not looking that bad for us, but it's hard to tell you if we are going to be always on the podium, or fighting with the Mercedes or the Williams. I think we need to work harder than anyone else to achieve our main objective. I think we can because Lotus showed the potential in the past. It's a good team. Maybe with the same budget or the same facilities as the others [they could be competitive more easily], but in the past they have released a very good car and with less than half the money. Everything can change. Mercedes is in the best position to approach this success, but who knows? In Formula 1 you never know. What I can say is I'm nearly 100 per cent sure that we'll be much more competitive this year.

Aiming at the big guns again

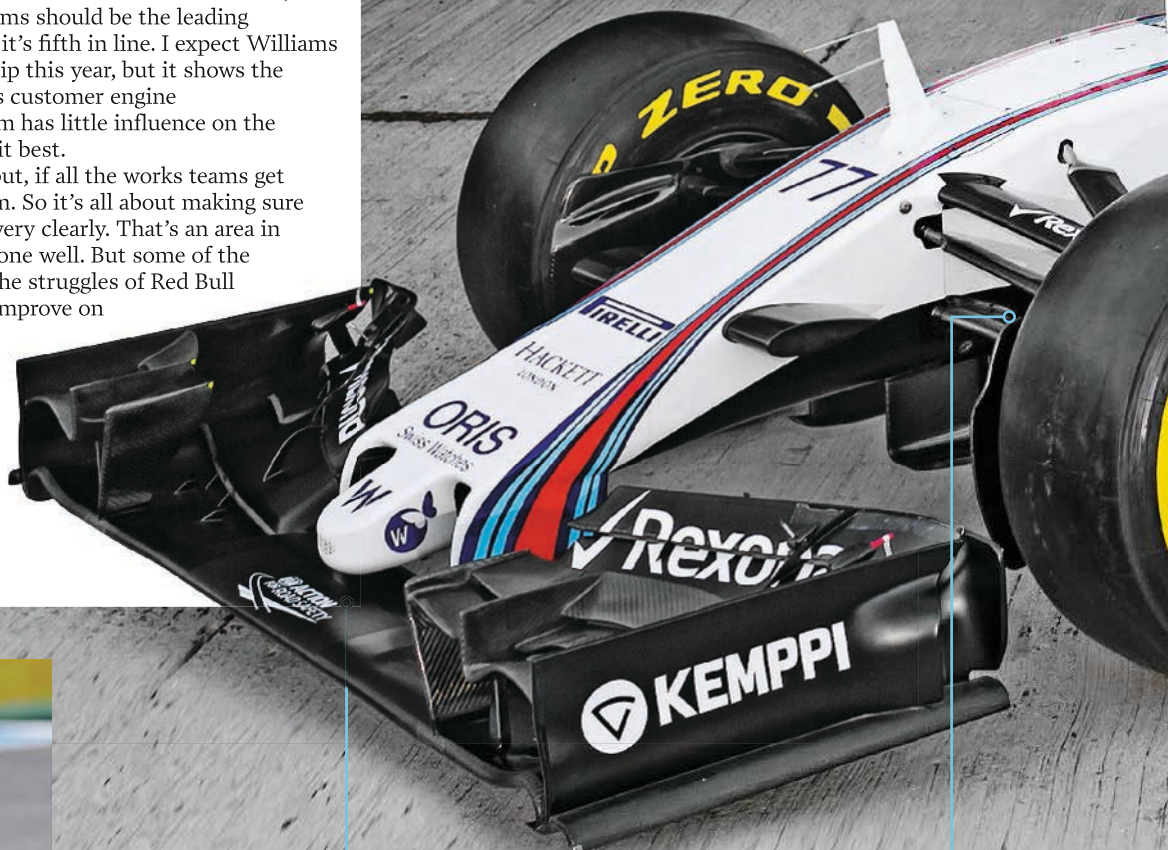
This well-loved and well-run privateer team must focus on maintaining 2014 form to again mix it with the works squads. By **GARY ANDERSON**

WILLIAMS-MERCEDES FW37

The interesting thing is that we now have four works teams: McLaren, Ferrari, Red Bull and Mercedes. So Williams should be the leading customer team, which potentially means it's fifth in line. I expect Williams to do better than fifth in the championship this year, but it shows the challenge it faces this year. The Mercedes customer engine is the same as the works one, but the team has little influence on the packaging and it's all about how you use it best.

Williams had a fantastic year in 2014 but, if all the works teams get it right this season, it will be behind them. So it's all about making sure with the car that your objectives are set very clearly. That's an area in which technical chief Pat Symonds has done well. But some of the Williams success last year was down to the struggles of Red Bull and Ferrari, so it has its work cut out to improve on 2014's third in the championship.

The main weakness last year was a lack of downforce relative to Mercedes and Red Bull. If Williams has improved on its strengths, and gained downforce, it should be in good shape. I can't see a dramatic step forward on a car described by Symonds as "not revolutionary", but it has nonetheless improved in detail from last year.



NOSE

Last year Williams had one of the best interpretations of the nose regulations, but this year I'm not so sure. The rule change is a negative in terms of the downforce you can produce. But it looks like Williams has ended up with a bigger negative than some. The nose is wide at the front, which is necessary if you want to keep the wing pillars wide apart to maximise airflow under the car. Last year the Williams wing pillars were very refined, but this year they are less so, apparently because there was little or no gain to be found in this area by being more three-dimensional.

SUSPENSION

Much of the car is about detail changes, and the front suspension has very angled wishbones again. There won't be a big benefit there in terms of improving the consistency of the front-tyre contact patch, as some other teams will have picked up. There have been some minor changes to the suspension geometry, but not any major change in concept.

“If Williams has improved on its strengths, and gained downforce, it should be in good shape”



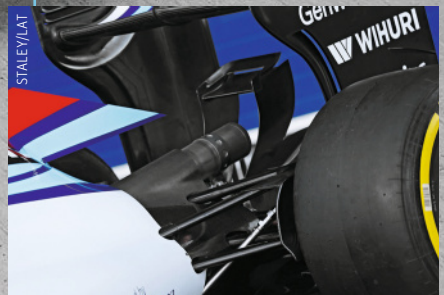
DRAG LEVELS

The car was generally the quickest in a straight line last year, which was often an advantage. But on the higher-downforce tracks the car did lack a bit. Williams claims to have hit similar drag targets this year, but also needs to improve downforce levels relative to the opposition.



SIDPODS

If you look at the configuration of the sidepods, they're very similar to last year's, so it's very much an evolution. But there have apparently been gains under the skin with the efficiency of the coolers.



ENGINE

Williams has the same specification of Mercedes engine as the works team – as the regulations dictate – but while this will surely be the strongest package it is still a customer team. Some changes have been made for packaging, but nothing that has transformed it.

Q&A



VALTTERI BOTTAS WILLIAMS DRIVER

How does the FW37 feel?

Pretty good. It was a bit of a slow start for us, some parts were a bit late and everything was a little bit on the limit to get ready for the first day. But after we got running everything went really well. The initial feeling was good. I feel it's a good base to build on.

Is the car a step forward?

Yes. And we will improve massively during testing and the season. The car was behaving consistently and I could do consistent times on long runs.

What's improved?

We have improved the aerodynamics

– they're more consistent in a corner. It's a nice thing to feel – you get more trust in the car. The car was good last year, but it feels better already.

Has the aerodynamic improvement compromised anything else?

No. There are no compromises.

How will Williams catch

Williams finished the 2014 season as the closest challenger to the all-conquering Silver Arrows.

BEN ANDERSON analyses whether the team can improve on that showing during 2015



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Vain hope, or realistic expectation? We won't know for sure until the latest breed of Formula 1 cars turn their wheels in (true) anger at the first race of the new year in Australia in March.

But, after a season of utter dominance by Mercedes, the hope among F1 fans around the world is that somebody, somewhere, somehow, can properly carry the fight to Lewis Hamilton and Nico Rosberg in 2015.

Recent disarray at Ferrari, too many unknowns at McLaren-Honda and undercooked Renault engines holding back a slick Red Bull team mean Williams could be that someone, especially if

upgraded Mercedes power units (which will also motivate Williams's new FW37) deliver the rumoured performance gains that are already keeping rivals awake at night.

Williams was generally best of the rest in 2014, despite failing to win a race in the face of Daniel Ricciardo's repeated opportunism. Had it not dropped scores of potential points through slightly clumsy early-season strategy – and several dramatic incidents for Felipe Massa – it would have run the deposed quadruple world champions from Milton Keynes much closer for second in the constructors' race.

Given the size, might and current competitive

advantage of the works Mercedes squad, it seems incredible to suggest that Williams could challenge for the world title this season. But Williams is a former champion that still exists to win. And in F1, you never know. If you do your job right, vain hope could easily become realistic expectation. Here, AUTOSPORT examines whether Williams really does have reason for optimism in 2015.

THE RACE WILLIAMS IS WINNING ALREADY

Success in F1 is all about the development race – making continual improvements to your car while chasing a constantly moving target. As one of the biggest teams in the business, Mercedes is superbly equipped to meet this challenge. Ex-team principal Ross Brawn was delighted by how his squad matched Red Bull's development rate during his final season in charge in 2013. Last season, Mercedes started with a hefty advantage over the pack, but kept pushing on with updates knowing they'd be relevant for '15 in the context of relatively stable regulations.

Williams has nothing like the budget of Mercedes, nor a recent history of strong aerodynamic development in F1 (its exhaust-blown diffuser of 2013 was so bad the car was actually faster without it!). But there's an argument to say that Williams actually developed its '14 car better than Mercedes did. The average gap between the FW36 and the W05 Hybrid on raw pace over the first nine races was 0.940s. Over the final 10 rounds that closed to just 0.484s. Of course there is a law of diminishing returns here, but that applies to Mercedes too, and



There's an improved culture within the Grove squad now

LEICESTER

Mercedes?

Williams ran ahead of Mercedes in the Austrian GP last season



TEEF/LAT

if Williams can keep up the same kind of effort during '15 it stands a real chance of becoming a massive headache to its engine supplier.

The team's performance chief Rob Smedley reckons a fresher (more honest) working culture at Williams allowed it to again become a force in the development war.

"The results speak for themselves – every time we went out we improved," Smedley says. "We made mistakes and we allowed ourselves to make mistakes as well. But when we make mistakes we have to understand why. We don't point the finger at anybody, or talk behind each other's backs; we all get our heads down and say, 'This is what we've got to improve.' That's how we are able to develop the car as we have done."

Williams adopted a low-drag aero philosophy for the first year of F1's V6 turbo-hybrid engine formula. That paid dividends and is set to continue for 2015. The key will be continuing to add all-important downforce *without* introducing unnecessary drag at the same time.

"Our target is to ensure the drag level we've been running is consistent with the 2015 car," adds Smedley. "Anyone can add downforce and add drag at the same time; it's [about] adding efficient downforce, and I think we are doing a fairly good job of it at the minute."

"Nothing lasts forever [in F1] – people understand how to develop their car better, they understand how to build a better chassis, have better harmony between the power unit and the chassis side of it, and when one team is dominant that dominance is usually decreased."

"Every time we went out we improved. That's how we were able to develop the car as we have" **ROB SMEDLEY**



COATES/LAT

"It's up to us, the other teams, whether it's Williams, Red Bull or Ferrari, to go out and do a better job than everybody else, and that's what we are going to try to do."

THE BOLTS NO WRENCH CAN TURN

There's an old motorsport saying: 'the loosest nut on any car is in the cockpit'. That's why, even in a discipline as technically advanced as F1, the driver is still one of the most important factors in the competitive equation.

In this respect Mercedes has little (if any) room for improvement. Lewis Hamilton elevated his race performances to a new level in collecting a second world title last season, while team-mate Nico Rosberg pushed him all the way to the final round and showed a stunning turn of speed on Saturdays that meant he outperformed 'qualifying specialist' Hamilton more often than not.

Williams reckons it has its own world-champion-in-waiting in Valtteri Bottas. The Finn produced a series of stunning performances in 2014. Technical director Pat Symonds is certain his young charge is a future world-beater.

"I've worked with a few world champions in their early days and I've no doubt that Valtteri will be a world champion," says Symonds. "He's very bright and he's very quick; he doesn't make many mistakes, and when he does he learns from them. He's got a great personality and is a real team player."

"It's not about being quick – that's almost a given and there are plenty of people who are quick but are never going to win the world championship. It's the intelligence, the application, the hard work, the attention to detail... Those sorts of things will win Valtteri the world championship." ▶



S.BLOXHAW/LAT

▶ That's one side of the garage taken care of then, – but what about the other? Felipe Massa looked a driver reborn after swapping the political machinations of Maranello for the family atmosphere of Grove. But the Brazilian (although quick) lost points to needless incidents. Crashing with Sergio Perez in Canada – and Kevin Magnussen in Germany – spring to mind. There was some bad luck too – he cannot be blamed for being clattered by Kamui Kobayashi's brakeless Caterham in Australia, or Marcus Ericsson's version in qualifying in Monaco. Further points also went begging to team errors (the first pitstop in China) and plain old bad luck (knackered fuel pump in Russian GP qualifying; running over debris from Hamilton's Mercedes in Belgium).

The feeling inside Williams is that Massa is absolutely the right man for the job. Certainly, if he can carry over the form he showed in the 2014 Abu Dhabi finale – where he fell less than three seconds shy of beating Hamilton to victory – then Williams will stand a good chance of carrying the fight to Mercedes more regularly.

"This is a good example of putting people in the right environment and they will flourish," says Symonds of Massa. "We all knew Felipe was quick and it wasn't that long ago that he almost won the championship, [but] he's actually quicker than I thought he was."

"I think he's in the perfect place now and I think the team is in the perfect place as well. We have given him the freedom he needed, and in return he's given us credibility and speed and championship points."

"If you put people in the right environment they'll flourish. Felipe's actually quicker than I thought"
PAT SYMONDS

THERE'S NO 'I' IN TEAM

As one of the biggest and most successful operations in F1 these days, Mercedes won't struggle to attract or retain top technical staff. True, former technical director Bob Bell left the Brackley team at the end of last year (a move announced in the spring that led to Mercedes diverting him to its DTM project), while performance engineer Jock Clear will replace Pat Fry at Ferrari once his release terms are agreed. But the nucleus of the squad that dominated F1 in 2014 remains largely intact, meaning it should remain a formidable technical force in '15.

Williams has extensively revamped its own technical team over the past 18 months or so, and a new structure led by Symonds and Smedley (recruited from Ferrari at the end of 2013) has immediately born fruit. The Grove squad is further bolstered by the arrival of Dave Robson



COATES/LAT

(formerly Jenson Button's race engineer at McLaren) and ex-Toro Rosso sporting director Steve Nielsen over the winter.

This recruitment drive will please ex-Ferrari driver Massa, who reckons Williams is outperforming his old team aerodynamically, but still has some work to do on the organisational side to match what he saw in Maranello.

"Williams is like a new team with so many new people and it's also a change of mentality," says Massa. "This is something where Williams was still behind – not just Ferrari but some other big teams as well. But I think the good thing is that Williams is working so well on the windtunnel. It's something that did not work for so many years at Ferrari."

"We still need to make some of the organisation better and that's something that's not going to change from one day to the next. To win the

Massa came close to Abu Dhabi GP victory last year



Bottas took six podium finishes in 2014 and is tipped for great things



championship you need to be perfect in everything. This is still an area that we need to improve. We saw some improvement during last season, but we are still working to fix it and start the [new] season on a more complete level.”

HEY BIG SPENDER!

They say money makes the world go round. Certainly, it makes or breaks teams in F1’s megabucks orbit (as Caterham and Marussia will testify). Williams posted a financial loss of more than £20 million in 2014, as it invested in its (successful) bid to climb the constructors’ championship table while absorbing the loss of disgruntled Pastor Maldonado’s PDVSA petro-dollars to Lotus.

Williams’s independent status and modest recent results record mean it cannot hope to match Mercedes’ financial might (it currently operates on less than a third of its engine supplier’s total spend in F1), so must aim for maximum efficiency in trying to return to the pinnacle of the sport.

Deputy team principal Claire Williams believes such giant-killing feats are part of her team’s DNA, and reckons the squad her father Frank built into one of the most successful in the sport’s history can recapture past glories without spending big. She also refutes claims by McLaren-Honda racing director Eric Boullier that it is “impossible” for a customer team to win the world championship in the modern era.

“We have a great relationship with Mercedes – as part of our contractual rights we get the same



Claire Williams upholds the team’s lean-yet-mean mantra

equipment that they get, so there’s no reason why we can’t win as a non-works team,” she argues. “Of course we all need more money, but it’s not a significant amount more money that we feel we need in order to compete. We’ve always had an efficient team. We’ve had to, because we’re an independent team and we only have two revenue sources: prize money and sponsorship. Frank and Patrick [Head] always operated Williams from a very lean budget and punched above our weight.

“We don’t believe we need to go racing with £200 million to win, and we don’t have the mentality that, because we don’t have £200 million, we can’t compete. We’ve always been a team that was able to win against rivals with bigger budgets. We’ve done it in the past and we’ll do it again in the future.”

Vain hope or realistic expectation? As ever, the world championship table will be the final arbiter. ❧

WILLIAMS IN 2014

3RD IN THE CHAMPIONSHIP

19 RACES | 9 PODIUMS

2 FASTEST LAPS

1 POLE

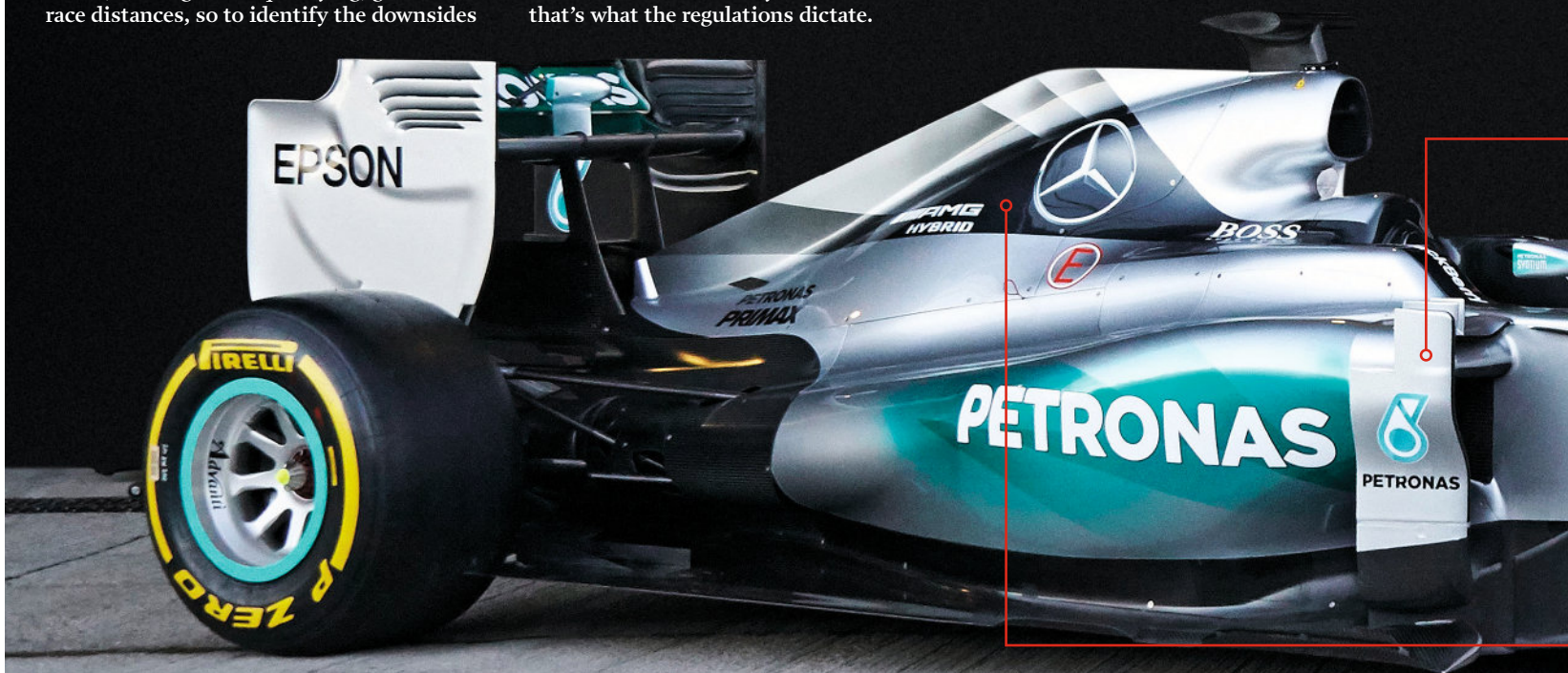
If it ain't broke, don't fix it

Last year's world-beater had so few vices that there was little to be changed, apart from a few tweaks. By **GARY ANDERSON**

MERCEDES F1 W06

The Mercedes looks very similar to last year's and there's a good reason for that. If you look back over the 2014 season and jot down the negatives, it's difficult to make that list very long. The car went well on a wide range of tracks, it was good in qualifying, good over race distances, so to identify the downsides

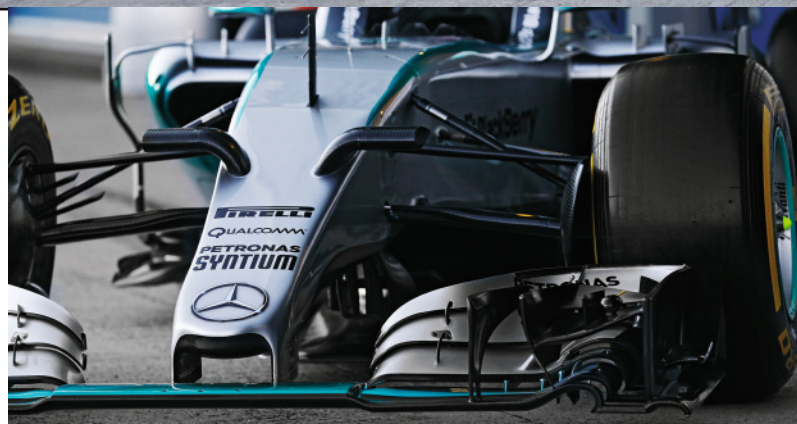
is difficult and those that were there wouldn't have been big issues. So you either do something new or just try to find more grip. This car is all about the small details and there's nothing too revolutionary. In effect, it's an extension of last year's car because that's what the regulations dictate.



36

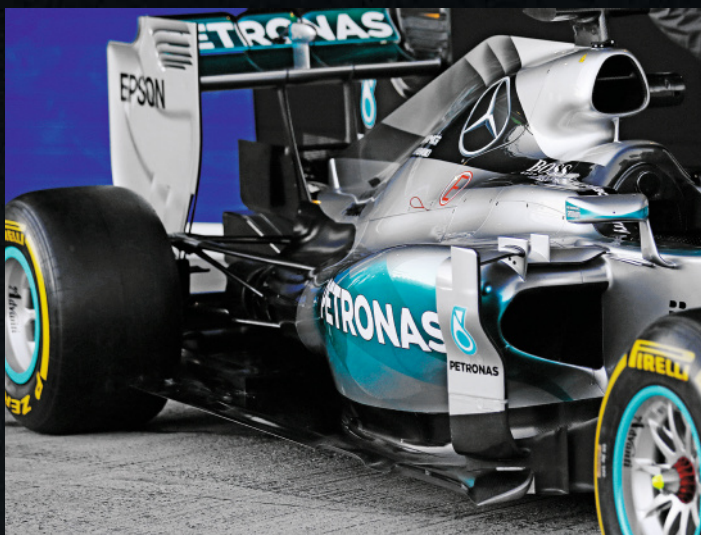
FRONT WING

The front-wing pillars are very narrow. The pillars themselves won't do much work and that's a deficit compared with last year in terms of the airflow under the car.



FRONT SUSPENSION

Because of the regulation change forcing the chassis to be dropped at the front, the wishbones are no longer at a ridiculous angle. That will be complementary to the front tyre and should improve the front-tyre contact patch in terms of it not rolling around so much under braking. That forces you to run a lot of static camber. Mercedes doesn't have to do that now, so the front-tyre grip level should be more consistent. The bottom wishbone has a very narrow base, the objective being to get the rear leg of the wishbone as far away from the leading edge of the sidepods as you can for better aero efficiency.



SIDEPODS

Over the top of the front of the sidepods Mercedes has the winglet section, which most teams have now. The Mercedes one is quite bitty, and I'm not quite sure why. But the objective is to reduce the lift created over the top of the sidepods, which spoils downforce. You may see this tidied up over time.

EXPERT VIEW



Paddy Lowe
Mercedes technical supremo

"Clearly we had a great car last year, but that's a bit of a double-edged sword because it means this year there is fantastic expectation from us. We also feel that pressure from outside and all of our stakeholders, and that's something we have to manage internally because we've got to keep pushing on. F1 is an unforgiving business and it's one in which if you don't pay attention it's quite easy to lose your position over the winter.

"We went through the process of designing the W06 determined to retain the advantage that we'd created with the W05. Every development you make has some risk – you can't move forward without some risk of potentially

not getting it right so we were very conscious of the point that we had a good car; we didn't want to throw any babies out with the bathwater.

"It's an evolutionary year from a regulation point of view and the car is essentially an evolution. But we do have to make progress by minor revolutions under the skin. So there are lots of small developments.

"Aerodynamically, the nose was a big project. The rule change has had an effect on performance; it remains to be seen whether people got hit differently. The nose, being at the front of the car, has a big influence because it creates the flow field that influences every other component."

"We hear claims from Renault, and Ferrari to a lesser extent, about making steps forward, but Mercedes won't have stood still either"



MERCEDES ENGINE

We hear lots of claims from Renault, and to a lesser extent Ferrari, about making steps forward. But the deficit to Mercedes we saw last year is not easy to come by. And Mercedes won't have stood still either. If Renault can find 30-40bhp of the deficit, that will make a difference, but it will still be behind. The Mercedes engine package will be the best, even if the advantage is cut a little.

RELIABILITY

Mercedes managed 157 laps on the first day of testing, which is very impressive. But nowadays, that's what you need to do to win championships. Every time you have to stop in testing, that's a potential problem at a race meeting. The W06 appears to have good reliability straight away.



10 challenges of Mercedes

The Three-Pointed Star goes into 2015 as clear favourite. But even the mightiest warriors must eventually face defeat, so here are the likely pitfalls that the team must negotiate safely. By **BEN ANDERSON, JONATHAN NOBLE** and **EDD STRAW**



Maintaining supremacy in grand prix racing is not easy. But while there is no single reason why Mercedes should drop the ball, such as a major rule change for 2015, there are always dangers that lurk for any squad that enjoys a position of dominance in the sport.

While Mercedes is very likely to retain the constructors' championship, and either Lewis Hamilton or Nico Rosberg should take the drivers' title, there's every chance that the

competition will be closer this year. In 2014, the three races Mercedes failed to win were all a consequence of factors unrelated to the speed of the car (once it was down to reliability problems, once a collision between the two drivers, and once through a combination of a failure in qualifying and a badly timed safety car). But there are 10 reasons why Mercedes could find this year more of a challenge.

1

Hamilton's contract talks

After both sides agreed to delay talking about a contract for 2016 and beyond until after last year's title battle was complete, it's perhaps telling that a deal between Lewis Hamilton and Mercedes is still not in place as the next championship challenge begins.

Although both driver and team believe that it's a mere formality for things to be sewn up, that they have remained in this state shows that there are still clear hurdles to be overcome.

The main issue is likely to be money, with Hamilton eager to be compensated according to his status as world champion, while Mercedes will be keen to ram his price down as much as possible.

The longer the matter goes on, the more tension it could create, especially if Fernando Alonso believes that there is a potential opening for him and starts playing some political games.

What neither Mercedes nor Hamilton can afford is for any contractual matters to cloud their on-track focus.



ETHERINGTON/LAT

2

The law of diminishing returns

When a new rules cycle starts, the competitive spread very often widens. Mercedes had a huge advantage last year thanks to the huge efforts put in during the build-up to the season. Not only was its chassis strong from the start, and developed effectively, but the Mercedes power-unit package was the market-leader.

But there will come a point where Mercedes starts to find it more and more difficult to find improvements and pushes up against the theoretical glass ceiling of performance. That's great news for the opposition, much of which still has some low-hanging fruit to grab, but there was little sign of Mercedes leveling off in 2014.

The upgrades introduced in the closing stages of the season allowed Mercedes to consolidate its position at the front of the field, and technical boss Paddy Lowe does not buy in to the idea that the current F1 regulations mean it's purely an engine war. The potential for aerodynamic development is still there even though the rules are tight.

The developmental returns will diminish for Mercedes. But it might not happen just yet.



COATES/LAT



BRIMM/GETTY

3

Complacency

How often does it happen this way in sport? A team or individual reaches the top and then relaxes, enjoys the fruits of success a little too much, and maybe feels there's nothing left to learn.

When you're leading the way it's also sometimes difficult to decide where or how to progress. When you're behind someone else, you have something clear to aim for; when you're ahead, you have no guide but your own imagination.

Possessing a competitive advantage also breeds conservatism: it means you have something to lose. When you have something to lose you start second-guessing risks you once would have taken in a

heartbeat. Inertia allows rivals to catch up faster, which can lead to panic, which will hasten defeat.

It's important that Mercedes realises the hard work is not over, that repeating its hard-won titles will likely require greater focus, more attention to detail and greater mental resolve than it required to get there in the first place.

Andy Murray ended an 80-year wait for a British male Wimbledon tennis champion in 2013, but crashed out in the quarter-finals a year later, admitting he needed to "get myself in better shape and work even harder, because everyone's starting to get better".

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4

Changes in the tech department

The lifeblood of any successful F1 operation is the brilliant technical minds that are able to produce winning cars season after season. Williams (1991-1997) had Adrian Newey, McLaren (1998-2006) had Adrian Newey, and Red Bull (2007-present day) has, er, Adrian Newey.

Mercedes doesn't have Adrian Newey (who is regularly the centre of speculation over big-money moves away from Red Bull), but its own capable team (led by ex-McLaren technical director Paddy Lowe) produced a car that was at least a match for the best chassis out there in 2014. In addition, the engine department (run by the long-serving Andy Cowell) is streets ahead of the opposition at present.

When you start winning regularly, rivals start looking long and hard at 'why' – then they begin the process of trying to poach your best people to work the same magic on their cars.

Ferrari has already lured Lewis Hamilton's performance engineer Jock Clear away (the terms of his release are currently being negotiated) and Mercedes will only face fiercer fights to hang onto its top technical personnel if it remains successful.

For now, the nucleus of its dominant 2014 campaign is largely intact, but it won't necessarily stay that way.

5
The engine war

Much has been made of the engine-freeze regulations being modified to allow in-season development. But while this does open up the potential for greater ebb and flow in the relative strengths and weaknesses of the power units over the course of the season, those who think it will automatically disadvantage Mercedes will probably be mistaken. The regulations governing how much you can change (from 2014 to '15, a maximum of 48 per cent of the engine as defined by

the regulations) remain unaltered; it's just the time period that has been extended.

But it does introduce a variable. Renault's energy-recovery-systems package was probably the best in the field last year in terms of the extra power that could be deployed over the course of a lap, so there is potential there for its engine becoming far stronger if the French marque can make big improvements to its functionality. As for Ferrari, it shouldn't have fallen any further behind.

6

Reliability risks

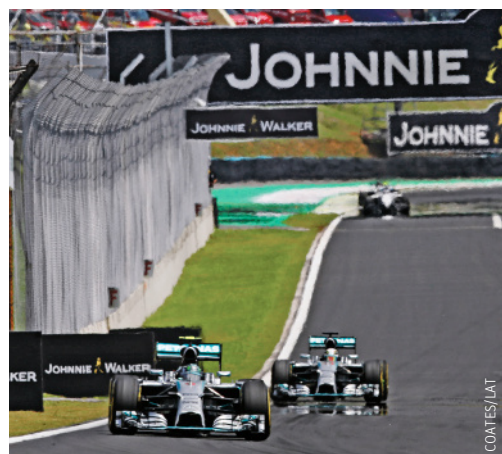
The Mercedes earned a reputation for unreliability last year that was perhaps overstated. Yes, there were more failures than some teams encountered but, while victory in Canada was lost to an ERS failure and Hamilton had a couple of problems in qualifying that left him in the lower reaches of the grid, it was hardly an endemic problem.



But if there are still some frailties and Mercedes has less of an advantage, that could lead any cracks that exist to be exposed. When you have a significant pace advantage there is the opportunity to manage how much you take out of the machinery, and Mercedes very often had the luxury of taking it easy. While a second year of development should have allowed any weaknesses to be addressed, if there are any potential vulnerabilities they could prove to be critical.

If the rest of the field is closer in 2015, that luxury will no longer be there; if Mercedes eases off, it risks getting drawn into the clutches of leading challengers such as Red Bull and Williams. And if its rivals are closer, any points lost to failures may prove very significant in the championship fight.

Certainly, Mercedes is going to have to work harder for its wins in 2015.



7

The spectre of team orders

Mercedes was rightly given a lot of credit for the way it allowed Lewis Hamilton and Nico Rosberg to battle it out head-to-head for the title last year.

And although that decision caused a few headaches along the way, it ensured that what could have been a fairly dull championship fight was turned into a thriller.

But we mustn't ignore the fact that last year's decision was made so much easier by the extent of Mercedes' domination. It could sacrifice some of its own overall performance to let the drivers fight it out in a totally even way.

Should the opposition get closer this year, and even get between Hamilton and Rosberg, then things could turn out very different. That could introduce the scenario of management needing to decide that the only way Mercedes can win as a team is if it throws all its weight behind one driver to give him the optimum strategy and perfect chance each time.

Mercedes may have to rethink its stance on team orders at some point. When that moment comes, the man on the losing end will almost certainly become hugely frustrated, which can in turn create fresh tensions that need to be managed. ▶

8

Motivation

Many sporting entities find it difficult to rise to the same level when the challenge is no longer 'fresh', or lifelong ambition is finally realised.

Arsenal and Germany defender Per Mertesacker helped his country lift the World Cup in Brazil last summer. In theory, he should have returned to Premier League duty with his club on top form. Instead, he found it difficult to shake the 'hangover' of success, and return to day-to-day duties with the same hunger.

"Personally it's difficult at the moment, because that was really a long season and to come back from that World Cup and get the motivation back... you can feel there is something missing," he admitted in October.

Sebastian Vettel's 2014 travails at Red Bull are a warning that if Mercedes should somehow drop the ball this year – perhaps by pushing its engine too hard or introducing a flawed design to its new car – it could demotivate its star performers. But history shows technical advantages are usually sustained during periods of relative stability in F1 regulations, so Mercedes ought to have no problems in this regard.



ETHERINGTON/LAT

42

9

Hamilton versus Rosberg, round two

Last year there were several flashpoints between the two Mercedes drivers. In Bahrain they came close to colliding on track while battling for the lead; in Monaco Hamilton was furious at what he saw as Rosberg's ill-gotten pole position; and in Hungary Hamilton refused, legitimately, to cede position to Rosberg. All of this came to a head, infamously, at Spa, where the pair collided on the second lap.

Team orders have already been addressed but, while there is always needle between two title-chasing team-mates in the same team, there is a very fine line dividing a healthy rivalry from a counterproductive one. Several times last year, there were hints that one driver or the other was holding back in practice to try and avoid giving the other some vital information. And there were also occasions where Hamilton expressed frustration at Rosberg being able to crib from his data.

All of that underlying needle will be there.

Whether it becomes a problem will depend on whether Hamilton continues his late-season dominance, or if Rosberg can produce a better return in terms of converting opportunities into actual wins.



ISTITENE/GETTY

10

Paddock politics

The manner of Mercedes' domination last year, and the massive advantage its power unit gave it, inevitably prompted rivals to do all they could to cut the Brackley team's advantage.

Amid the big end-of-year fight to allow in-season power-unit development, Mercedes found itself on the receiving end of some pretty smart games from Renault and Ferrari, who in the end succeeded in establishing the existence of a loophole that would enable them to work on their engine throughout 2015. If Mercedes' dominance continues, then it will only be targeted

more: avenues where its rivals believe it has a big advantage will be closed down and the team may find itself ganged up on politically in a bid to weaken it through isolation.

The fact that Mercedes has multiple chiefs, in Toto Wolff, Paddy Lowe and Niki Lauda, also gives the opposition a chance to divide and conquer – and try to play the three off against each other in the hope of breaking team unity.

It will take some smart management to keep a lid on any games rivals try to play with Mercedes. ❧

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This year will certainly prove to be another significant period in the development and continued growth of the University of Bolton.

It has been confirmed that the University will receive a capital grant for the development of a new £10 million STEM Centre building, specialising in science, technology, engineering and maths.

These premises will house the University's new National Centre for Motorsport Engineering.

Students studying Advanced Performance Engineering will have access to the best and most contemporary equipment in a purpose built environment.

Engineering (CAPE) opened in 2013 providing students with an advanced engineering career experience which is second to none.

CAPE is the only centre that has a professional racing team, RLR M sport, based on campus. This gives students hands on experience from theory to practice, from the classroom to the workshop and then following the race team on the racetrack.

In addition CAPE is collaborating with Keating Supercars and Ginetta, and is the first owner of the new Ginetta-Nissan LMP3 which will race in the European Le Mans Series. This will further cement the University of Bolton as a leader in Advanced Performance Engineering, and make it a hugely desirable prospect to potential students.



The Centre for Advanced Performance

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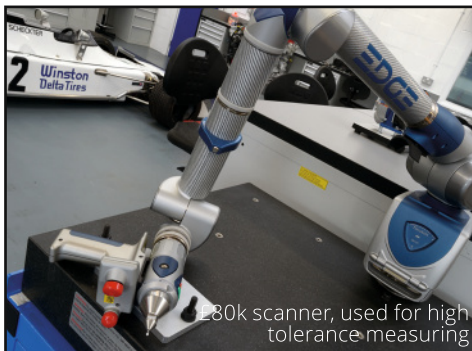


Students working trackside with RLR Msport

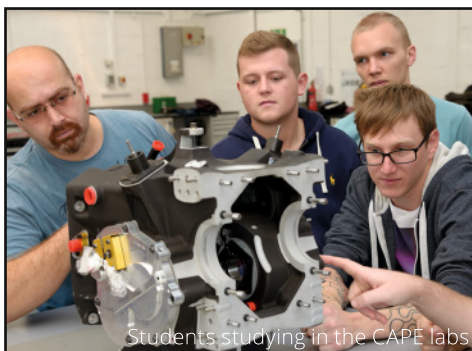


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Students studying in the CAPE labs

The University of Bolton will host an open day at CAPE on Saturday March 14, from 10.30 am until 2.30pm

Former F1 driver, Mike Wilds, will deliver a keynote speech on 'what the industry wants from motorsport graduates and the impact of hands-on experience on their employability'.

Following this, a panel discussion with Mike Simpson, official driver for Ginetta, Nick Reynolds, owner of RLR Msport and Tony Keating, owner of Keating Supercars, will be chaired by renowned journalist and TV presenter, Gordon Burns.

The panel will discuss how the University is meeting demands by creating new engineering jobs and through its work with world renowned

car manufacturer Ginetta and Keating Supercars.

Networking opportunities with lecturers and VIP guests over lunch, and tours of the CAPE facilities, provide the perfect introduction to anyone wishing to kickstart their career in the motorsport industry.

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Jonathan Noble

F1's newshound

Red Bull's camouflage livery demonstrated the evocative power of shapes and colours; other teams need to follow that example

Seldom in the modern Formula 1 pitlane have so many people stopped whatever vitally important tasks they were performing to do a double-take at the car that has just blasted past on its way out onto the track.

That's exactly what happened at Jerez during F1's pre-season testing kick-off when a dizzying blur of unrecognisable white-and-black shot past. Having not caught sight of which garage it had emerged from, it took a split-second to work out what the imposter was. In the end, the Infiniti badges were the giveaway.

This was the new, camouflaged Red Bull RB11. And it looked mighty.

Having successfully kept the lid on not only its car design but its testing-livery concept in the build-up to Jerez, Red Bull certainly caused a stir when it unleashed its stunning visual conceit. It's not very often that an F1 team ends up doing something that is a genuinely pleasant surprise. Twelve months ago the shock was about how terrible the 2014 noses looked when we first got a glimpse of them; now there was a bit of awe about Red Bull actually doing something that got people excited.

Undoubtedly there will have been a technical motivation in running camouflage – the 'dazzle' colour scheme, first applied to shipping in World War I to conceal a vessel's range and heading, is frequently used by road-car manufacturers to frustrate covert photography of their new models, and it certainly made it harder to pick out fine details of the RB11. Equally Red Bull's marketing

remember one of the best looking cars ever – Gary Anderson's Jordan 191 in the 7-Up branding.

When word emerged that Martini was returning to F1 as title sponsor of Williams, it caused tremendous excitement for everyone. That enthusiasm had nothing to do with the onset of cocktail hour, and everything to do with the allure of those famous dark blue, light blue and red stripes, triggering a rich and pleasing flow of historic associations – from Helmut Marko and Gijs van Lennep's thunderous Porsche 917 to Juha Kankkunen in maximum-attack mode aboard a Lancia Delta HF Integrale.

Liveries are important because they can help stir the soul. They provide identity, and they are part of the emotional link between fans and the team they follow. That's why there was such a frenzy of excitement ahead of the McLaren-Honda launch this year, as its followers speculated about what colour the new car would be.

It explains, too, that while the team raved about the ultra-tight packaging and how impressive the MP4-30 was under the skin, onlookers experienced a frisson of disappointment as they regarded its familiar colour scheme. Critics suggested the team should have done more with the opportunity to break visually with its recent Mercedes past.

Even if, as has been mooted, the arrival of new sponsors may bring on a change for the season opener, why not revert to that famous orange testing branding that got fans excited in 1997, '98, and as recently as 2005?

“The ‘zebra’ car became a focal point because liveries elsewhere have proved so predictable”

people pulled a masterstroke in grabbing the publicity spotlight. The 'zebra' car became such a focal point because team liveries unveiled elsewhere on the grid have proved so disappointingly predictable.

It's all too easy to underestimate the importance of an evocative, memorable colour scheme for stirring all of us who follow the sport. If you doubt that proposition, just take a look at some of the imaginative livery ideas that artistically inclined fans have been posting on the internet and social media in recent weeks.

When we think back to some of the memorable and best-looking cars of the past, what comes to mind? We don't recall the marvels of a front-wing design, an aggressively packaged rear end or a beautifully integrated front suspension layout.

We hark back to the black-and-gold JPS Lotus. We think of those red-and-white Marlboro McLarens from the 1970s through to the '90s. We recall Nigel Mansell in the yellow-blue-and-white Canon Williams. And we

In recent years, as F1 has become more corporate, so too its liveries have become just that little bit less exciting. This has happened at the same time as F1's cars have evolved to become all too similar too thanks to ever-more-restrictive regulations.

If a team wants to stand out – just like Red Bull did in Jerez – then why not be a bit bolder? The camouflage livery may only be temporary but there is still room for creativity when Red Bull reverts to its usual blue-and-purple palette for the opening race of the season.

As F1 continues to discuss what is being termed a car revolution for 2017, some thought should be given to liveries and the way the cars are branded. Getting cars that look amazing should be as much of a priority as 1000bhp engines, wider tyres and delivering a bigger challenge for drivers. The designs have to excite again – to make us regularly do double-takes.

So hats off to Red Bull for offering us a glimpse of that, and reminding us why liveries matter so much. ❧

The masters of disguise

The RB11 comes from good stock but, as **GARY ANDERSON** explains, it's a b-spec car with several upgrades to follow

RED BULL-RENAULT RB11

The special camouflage test livery doesn't make it particularly easy to see the detail on this car, but it's very clearly the latest in the long line of this family of Red Bull cars that stretches back to 2009. Adrian Newey hasn't walked away completely so I'm sure he is still guiding this one.

The car that we saw at Jerez very much looks like a b-spec of last year's and there could be a lot of changes to come. But while that's a good foundation, Red Bull also has to be careful.

A lot has changed. Sebastian Vettel, the man the team built itself around, has gone and Adrian's role has changed, so it's a different team. Daniel Ricciardo had a great year in 2014, but it's always possible to surprise in a negative direction.



REAR WING

This is single-pillar mounted, with the endplate design similar to last year's. This is typical of a car that, in truth, you can't say is particularly different to last year's, except for dotting the 'i's and crossing the 't's, as well as complying with the new regulations.



COKE BOTTLE

The rear of the car has been squeezed, so the Coke bottle starts earlier. That's potentially very good, but you have to be careful because an overly aggressive design can create airflow-separation problems. A lot has changed in the team aero-wise, but I'm sure there are a lot of good people there to ensure this has not gone too far.

“The livery doesn’t make it easy to see the detail, but it’s very clearly the latest in the long line of this family of Red Bull cars that stretches back to 2009”

RENAULT ENGINE

Red Bull will have had a big list of potential areas for improvement from 2014 to '15. But the big weakness last year was the Renault engine, and there's not much the team can do about that other than put the pressure on. Given that this car looks much like a b-spec, this suggests Red Bull is relying on the engine taking a big step to bring it up to the level of Mercedes. That's not a bad strategy given that last year's car was no slouch.

NOSE

This is the most obvious change from 2014, with the drop-down nose changed to comply with this year's change in regulations.

FRONT WING

The front wing is still multi-element, with the outboard sections similar to last year's car.

FRONT SUSPENSION

Red Bull's front suspension runs at quite an angle, probably as steep as anyone's. This team has always attempted to optimise the aero to get the maximum downforce out of the car, because that's where you can make performance gains – even if it's at the expense of mechanical grip.

TIGHTER PACKAGING

A lot of the attention to detail on the Red Bull will have been under the surface with the cooling packages. These will have been repackaged to make them more efficient and allow space to improve the aerodynamics. But you need to be careful, for while the packaging of the cooling systems allows optimisation of the aerodynamic flow, Renault won't close the gap to Mercedes without a big change in cooling characteristics. There's a big difference between Jerez in February and the heat of the Malaysian GP, so it's too early to say whether or not this is a really good package. Let's wait and see.

Q&A



THOMPSON/GETTY

ROB MARSHALL CHIEF DESIGNER

To avoid last year's cooling issues, was it a case of changing the aero or adjusting the coolers?

Most of it is aerodynamic packaging, with a slightly different cooling concept, which we think will help the packaging of the rear. All of the coolers are different. The shaping, packaging and ducting to and from them is optimised.

Is the nose just an evolution of last year's?

It's a slightly different concept but, as for the exact process of designing it, of the few different noses we tried, it's the one we like best at present. No doubt there'll be other ones in the future, and I'm sure other teams will be preparing other noses, wings and God knows what else. What you see on the first day of the first test isn't what we'll always roll out later on.

How many parts from last year have you carried over?

Very few parts get carried over as most things can be improved, even if it's just a bit of weight saving or reliability improvements. A lot of other things are changed because of the knock-on effect of a performance enhancement. Everything's so interlocked that very little gets carried over now.



THOMPSON/GETTY

LEADING THE LINE THE LINE FOR RED BULL

Daniel Ricciardo outperformed Sebastian Vettel last year, but now the German has left he's the undisputed team leader. **JONATHAN NOBLE** asks if he can build on a stunning 2014 season

He may have embraced stepping up to a top-line Formula 1 seat like a duck to water, but skiing is a completely different matter... And so it was that Daniel Ricciardo had to watch from the sidelines during Red Bull's 2015 team launch at the Milton Keynes Snozone indoor slope last week.

So while team-mate Daniil Kvyat impressed with his twists and turns, Ricciardo limited himself to some hot chocolate at the bottom of the slopes –



Horner's main men:
Daniil Kvyat (left)
and Daniel Ricciardo

and a brief foray on a sledge.

"I'm a better race car driver than I am on the snow," he smiles. "I prefer summer."

Fair enough. Growing up in Western Australia doesn't throw up too many opportunities to learn to ski and even now, being covered in the same Red Bull logos that adorn many an adrenaline-junkie, there's not much interest in getting lessons either. There's a Formula 1 World Championship to chase after all.

Ricciardo knows what he's good at. He knows what he's here to do: drive F1 cars faster than anybody else.

He's transformed from promising young grand prix hotshot to a big star within the space of 12 months. The manner in which he grabbed the opportunity of a Red Bull seat with such aplomb impressed everyone, and certainly played its part in forcing four-time world champion team-mate Sebastian Vettel to accept that the time had come for a change.

Ricciardo's three wins last year were of the highest order, for on each occasion he forced himself through a door that had been left very slightly ajar by Mercedes. He also had little hesitation in racing wheel to wheel against some of F1's big boys – including Fernando Alonso – and earning their respect.

It all seemed so effortless too. He didn't allow Red Bull's nightmare pre-season build-up to get

him down, ditto the disappointment of losing that maiden podium in Australia. And then came his emergence as a regular race winner.

But while success has not changed Ricciardo as he heads into 2015, what it has changed is the weight of expectation on his shoulders. He's no longer the young pretender with a point to prove; he's now the *de facto* team leader. Vettel's absence means he has to step up to the plate and take charge of engineering direction, pushing the team on and overcoming the threat of an even younger man in the second seat.

Yet just as he was unflustered by being the new kid in the big school last year, so too is he unmoved by how he must behave as head boy. "Whatever your name is in the team, and last year I was the young kid, you're still competing at the end of the day," he explains, talking about what changes for him in 2015. "You still have to compete against your team-mate.

"If you're smart enough it shouldn't affect the way you drive. It should remain all unchanged, so I don't plan on doing too much differently.

"Hopefully we have a good winter, both Daniil and I work well together, and we can put Red Bull together in the ▶



**August 2013
Red Bull deal**
Earns promotion
with STR results

**March 2014
Red Bull bow**
Flies on Red Bull
debut in Australia

THOMPSON/GETTY



Horner hopes Ricciardo will continue 2014 form

► strongest position in Melbourne. Then the quickest guy can come out on top.”

One of Ricciardo’s strengths is that his approach appears identical to when he first came in to F1. Pressure and the growing need to deliver seem not to have an impact, or at least he does a very good job of not letting it show.

“Sure, people are more aware of what I can do,” he says about the need now for him to deliver. “If I come out strong in the first race in Melbourne, they won’t be surprised, but it doesn’t change my approach.

“I remain humble about it. Nothing has been achieved in 2015. It’s like starting from scratch, so I need to put in the work.

“Everyone else could get better, especially the young guys coming through, so we always need to find ways to improve. I expect to be quick, but I won’t let other people’s expectations affect my performance. And if it does add pressure, I tend to enjoy that situation.”

Indeed, rather than the pressure of expectation weighing Ricciardo down after his stunning 2014, his team boss Christian Horner thinks this will actually help him thrive. “On paper he went up against the best in the world and he came out on top,” explains Horner. “For him, his confidence, you can see it grow.

“His campaign last year was superb and his confidence grew and grew. The three wins, the podiums he achieved, from the very start in Melbourne, you could see he was a really exciting prospect. Hopefully he will only build on that.

“The expectation is going to be different for him this year. He is no longer the underdog; he is an established grand prix winner. But I don’t see any change in his attitude or approach. Hopefully he will take up where he left off in Abu Dhabi last season.”



June 2014 Takes maiden F1 win in Montreal

Progress is certainly all Ricciardo is aiming at. “I want to keep building, keep improving,” he says. “Obviously last year went really, really well, and obviously the results were really good for me, and third in the title was great.

“But on a personal level – disregarding results – I was happy with my balance, with the team, with life in general. I was in a good place.

“I want to not really do anything different, and just keep learning from the stuff I know already. I learned a bit from Seb, his experience, and Daniil is going to bring a new dimension into the team and I will learn some new things from him.

“So I’ll take what I can, use it to my advantage and keep perfecting the little things – and keep enjoying it. That’s important.”

As well as not letting the pressure – or performance frustrations about the Renault engine – get to him, Ricciardo also made very few mistakes on track, and certainly none on days that really mattered.

Few are expecting Mercedes to be anywhere else but at the front again this season. And that means that if Red Bull and Ricciardo are going to launch the title challenge that they so want, it means making the most of every single opportunity that comes their way.

It will be about delivering perfection not just

“I’ll take what I can and keep perfecting the little things – and enjoy it. That’s important”

on three afternoons like last year, but 20 times. It’s something Ricciardo is only too aware of.

“Looking back, it was pretty awesome how we won three races when they [Mercedes] were so dominant,” he explains. “Whether they had problems or not, we still put ourselves in the right position. So if we can halve the gap, at least start the season like that, then it’s a good start. And then try to apply a bit of pressure as the season goes on and try to be perfect when they’re not perfect. When they’re not perfect, we can put the pressure on them.

“I want to win more races!” he adds, “and hopefully get more results in a title fight – a proper one. I was hanging on by a string last



Kvyat had the edge over Ricciardo in pre-season skiing

KVYAT – DOING A RICCIARDO

Daniil Kvyat has big boots to fill. And that’s not only because he’s stepping into the seat vacated by four-time world champion Sebastian Vettel. But rather than the expectation on him to deliver what Vettel did when he arrived at Red Bull, there will be more pressure on him to repeat Daniel Ricciardo’s stunning step up.

Ricciardo wasted no time in making that leap from midfield contender with Toro Rosso to regular frontrunner with Red Bull. It means there will be no grace period for Kvyat. Such a prospect would unnerve some drivers, but Kvyat is not one to care about that. He thinks only of getting in the car and delivering – anything else is a distraction.

“That is what you should always aim for,” he says about repeating history for Red Bull. “We are here competing at the highest level and there cannot be

another choice. You have to keep working hard and pull it all together, and hopefully it will bring some good things in the future.”

Team boss Christian Horner accepts that perhaps Kvyat will not be as impressive as Ricciardo was straight away, but equally is sure that he will surprise some people.

“In Kvyat we have a really fast, determined and intelligent driver,” he says. “Sure, he’s a little bit rough around the edges, because he has only done 19 GPs. But his commitment, speed and application are excellent. I envisage there will be the odd mistake, but that’s natural in a young driver on the trajectory he is on. I think he can be the surprise of this year, in the same way Daniel was last year. He has all the right attributes to do some really fantastic things.”



July 2014
Takes stunning last-gasp win in Hungary

2015
Undisputed team leader at Red Bull

COATES/LAT

year; a realistic one [run for the title] this year would be good.”

Perhaps the true test of Ricciardo will come not from simply delivering another step up, adding more wins or producing that proper title fight he craves. Instead, it could be from seeing how he copes when things don't go right, when that clear line of progression that has followed his career from HRT to Toro Rosso to Red Bull levels off or even dips.

It's all too easy to keep smiling as Ricciardo does when good things happen so naturally, but when it comes to a full-blown title assault – and your rivals are doing everything they can to put you off your stride – then knock-out blows can appear from anywhere.

Ricciardo knows that at some point the good times will stop and frustrations will come to the fore. But that won't serve as a way of erasing that trademark smile.

“My view on a lot of it, even my worst day in the sport, is that a bad result for me is still a pretty good day in the scheme of things,” he says. “It depends what outlook you have on life.

“Obviously if I have 10 bad races in a row then I will probably struggle and smiling will become a bit harder. But in general, if I'm getting the most out of it and out of what I can achieve, deep down I will still have things to smile about.

“I know racing isn't always up to the drivers. There are mechanical influences and it's inevitable that you'll probably have a retirement during the season and in future, but that's part of the sport. Generally I think I can definitely keep smiling. If I keep putting in the work I can stay strong in this sport.”

Ricciardo is not for turning, either on the ski slopes or in his approach to F1. Red Bull's rivals should beware. ❧

THE SECRETS OF RICCIARDO'S SPEED

Daniel Ricciardo is a very conventional driver in terms of his style. That's not a criticism, merely a reflection of the fact that he does the basics extremely well and is therefore able to perform through a wide range of conditions. In a way, he's something like Jenson Button, but able to deliver with a wider range of car and track characteristics.

Ricciardo usually carries good speed from turn-in to apex with a progressive entry to the corner, letting the car do the work. By contrast, his 2014 team-mate Sebastian Vettel would tend to rotate the rear more aggressively, with the relative lack of rear downforce compared to the exhaust-blown-downforce days often putting him in trouble mid-corner.

Ricciardo, by contrast, has the car very much under control, so you rarely see him out of shape in corners. There is a compound gain to this, for

while he was clearly superior to Vettel last year in qualifying, it was in races that he shone more.

His style consistently gave him a tyre advantage over Vettel, particularly in the slower corners where the German was at his most aggressive on turn-in. As with Mark Webber, Ricciardo was also sometimes faster in the quick corners. But given that F1 cars spend a greater percentage of the lap in the slow stuff, it was in these corners that much of Ricciardo's advantage was generated.

It would have been interesting to see how Ricciardo adapted to the best of the exhaust-blowing cars, which required a counterintuitive driving style at which Vettel excelled. But there's no doubt that his fundamental approach will allow him to extract the best from a broad range of machinery. *Edd Straw*



Racing for the top five

The STR10 arrives with the lofty ambition of finishing in the top five, and the early signs are good. By **GARY ANDERSON**

TORO ROSSO-RENAULT STR10

The team that was once Minardi had a car that was quick on occasions last year, but often failed to score the points it should have done. Toro Rosso has grown in terms of its facilities and personnel under technical

director James Key, who used to work for me at Jordan. There's a clear desire to move up the grid, as shown by setting a very ambitious target of fifth in the constructors' championship. It's not going to be easy.

COOLING PACKAGING

The cooling requirement of the Renault power unit from 2014 to this year will not have changed much. But if Renault has used its engine-change tokens wisely (which makes it sound as if F1 has become about slot machines deciding who wins) and found some more power as a result, then the heat rejection will have increased. Toro Rosso has cleaned up the overall cooling package and, in doing so, tightened up the bodywork around these components, giving a better airflow to the rear. Apparently, even tighter bodywork will be introduced before the first race of the season.

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NOSE DESIGN

Toro Rosso has read the regulations closely and its initial nose design follows the wording to the letter. I'm certain we will see some changes in this area before the start of the season, but there is very little room for visually different solutions. So it will be all about minimising the losses and using the wing-mounting pillars as flow-direction devices to optimise the airflow to the leading edge of the underfloor.



FRONT SUSPENSION

As a result of the nose regulations, Toro Rosso has switched to a more horizontal front-wishbone design. This will help with stabilising the front-tyre contact patch. In effect, this means the car will get more front grip, but more importantly that grip will be more consistent.

SIDEPODS

The sidepod exits have been 'pinched' around Toro Rosso's own gearbox-casing design (the team uses gearbox internals from Red Bull). This is to minimise the extent to which the slow-moving airflow from inside the sidepods merges with the fast-moving airflow passing around them. The higher the airspeed between the rear wheels, the more downforce is generated by the rear wing and the more help you give the diffuser.



Q&A



FOX/GETTY

JAMES KEY
TECHNICAL DIRECTOR

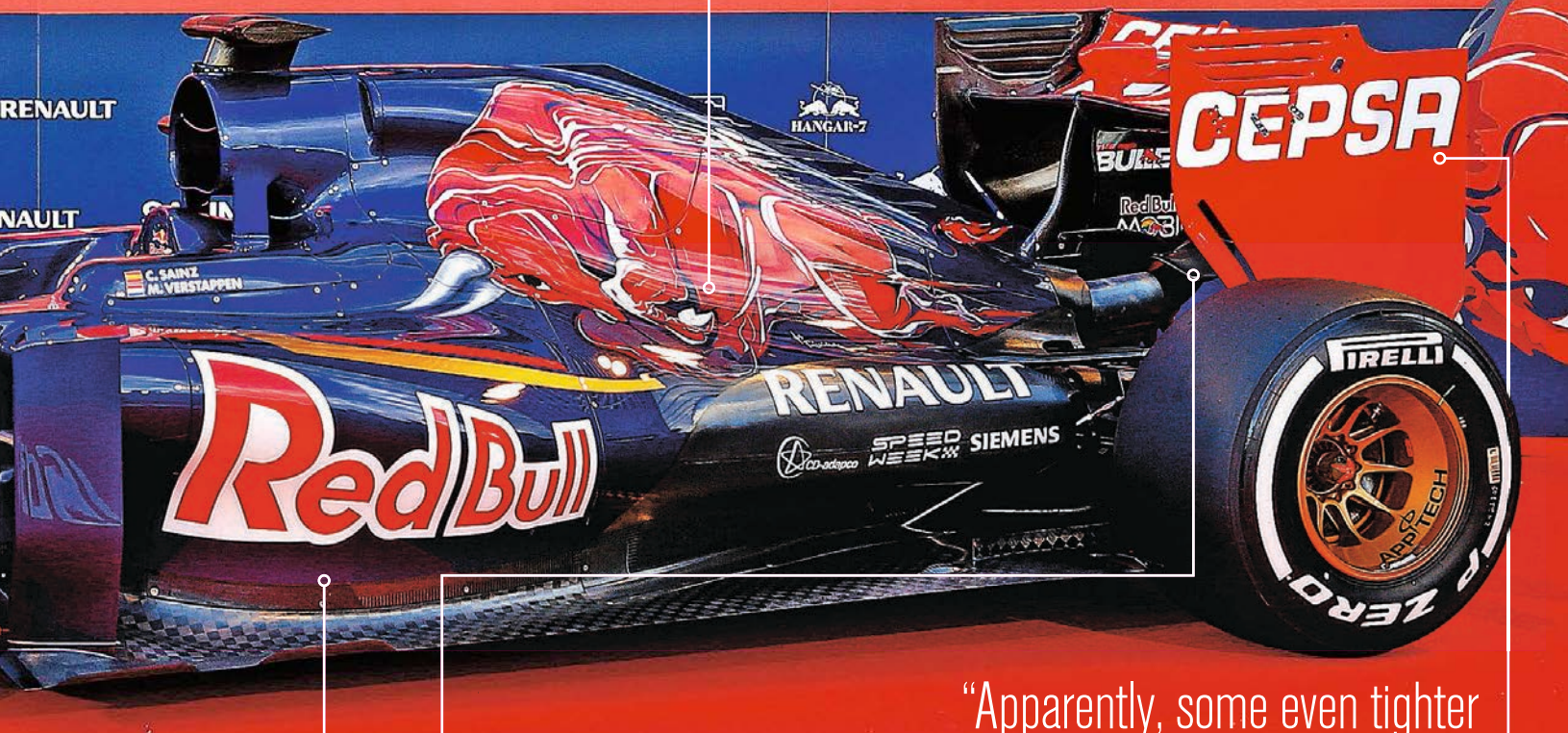
What are the changes for 2015?
Many. We've had a year of these new regulations, so you can review everything. The big thing was trying to maintain the maximum development rate possible because the second year of regs is when the grid can begin to separate a little. The nose is a visible change, but we will see the race-spec car [and nose] in test three and at Melbourne.

How different is the packaging of the power unit?

It was clear when we knew the size of the coolers and the other components that we could make a big step forward compared with last year. We worked really hard on the packaging so it's incredibly tightly packaged under there. And the bodywork will tighten up further in a few races.

Franz Tost described this as the best car Toro Rosso has ever built. Is that launch bluster or is there something behind that?

We will see for sure when we get to race but there's a lot in it. This is the first car we have built with the full team structure in place that we set out to create two years ago. This is a big step over last year. Our timescales have reduced, communications have improved, and most of the car is new, so we are better prepared than we have been for the past two years.



“Apparently, some even tighter rear bodywork will be introduced before the first race of the season”

MONKEY SEAT

Toro Rosso retains the small saddle wing above the mandatory single exhaust outlet. This uses the higher-speed exhaust gases, which accelerates the airflow passing over the winglets to produce some extra downforce.



DUNBAR/LAT

REAR WING

The rear-wing endplates are as 'three-dimensional' as the regulations allow, with louvres at the top, the leading edge and the lower section. These louvres actually increase the three-dimensional shape by allowing airflow to pass through them, changing the air pressure on the inner and outer surfaces. The lower louvres are there to connect the low-pressure area behind the rear tyre to the diffuser. This is to make the whole rear end work as one, improving the diffuser performance dramatically, especially under braking when maximum rear stability is required.



DUNBAR/LAT

THE NEWCOMERS: CARLOS SAINZ JR

Scuderia Toro Rosso fields an all-rookie Formula 1 line-up this year. **GLENN FREEMAN** and

CARLOS SAINZ JR

Had Sebastian Vettel not upped sticks and swapped Milton Keynes for Maranello, Carlos Sainz Jr would almost certainly not be a Formula 1 driver in 2015.

The Spaniard's hopes of landing a seat at Toro Rosso appeared dashed when Red Bull signed Max Verstappen to its B-team for this year. But in a whirlwind few weeks last October he became the energy-drinks firm's first protege to win the Formula Renault 3.5 title, hot on the heels of Vettel's departure for Ferrari that led to Daniil Kvyat vacating his Toro Rosso seat for this season.

Sainz's efforts in 2014 warranted a chance in F1 – he just had to sweat on it for a while.

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SPEED 9

Seven wins (a FR3.5 single-season record), seven poles and six fastest laps proved his speed. He started 11 of the 17 races from the front two rows, and six of his wins came with 10s-plus margins.

ADAPTABILITY 8

Qualifying fifth on his FR3.5 debut in Monaco in 2013 showed he can adapt to a faster car. And during the 2013/14 winter he "threw everything away except my talent" – wiping the slate clean to launch a title push.

RACECRAFT 6

It's hard to judge the racecraft of a driver who often dominates from pole. But on the rare occasions that Sainz did qualify further down the field, his progress wasn't as stunning as Kevin Magnussen showed en route to the 2013 title.

WET-WEATHER CAR CONTROL 10

Well, low-grip car control is in his genes, right? Even in the dry, an on-form Sainz's style can be swashbuckling. His wet performances have always been remarkable; all four of his F3 wins came in soggy conditions.

TECHNICAL 8

McLaren-groomed Magnussen set the bar high for Sainz at DAMS last year, but the Spaniard wasn't found wanting in any areas out of the car in 2014. His job was to pick up where the Dane left off, and he did that competently.

CHARACTER 9

He was a little down in the dumps on the first FR3.5 weekend after Verstappen appeared to have taken his only shot at F1, but he bounced back, dominating at Paul Ricard to effectively seal the title while his future was still in doubt.

18+ MATURITY 9

Sainz Sr says the winter of 2013/14 was when his son went from boy to man. Daniil Kvyat dominated him in GP3 and landed F1, so the pressure was on. He became FR3.5's youngest champion, but never seemed like a kid.

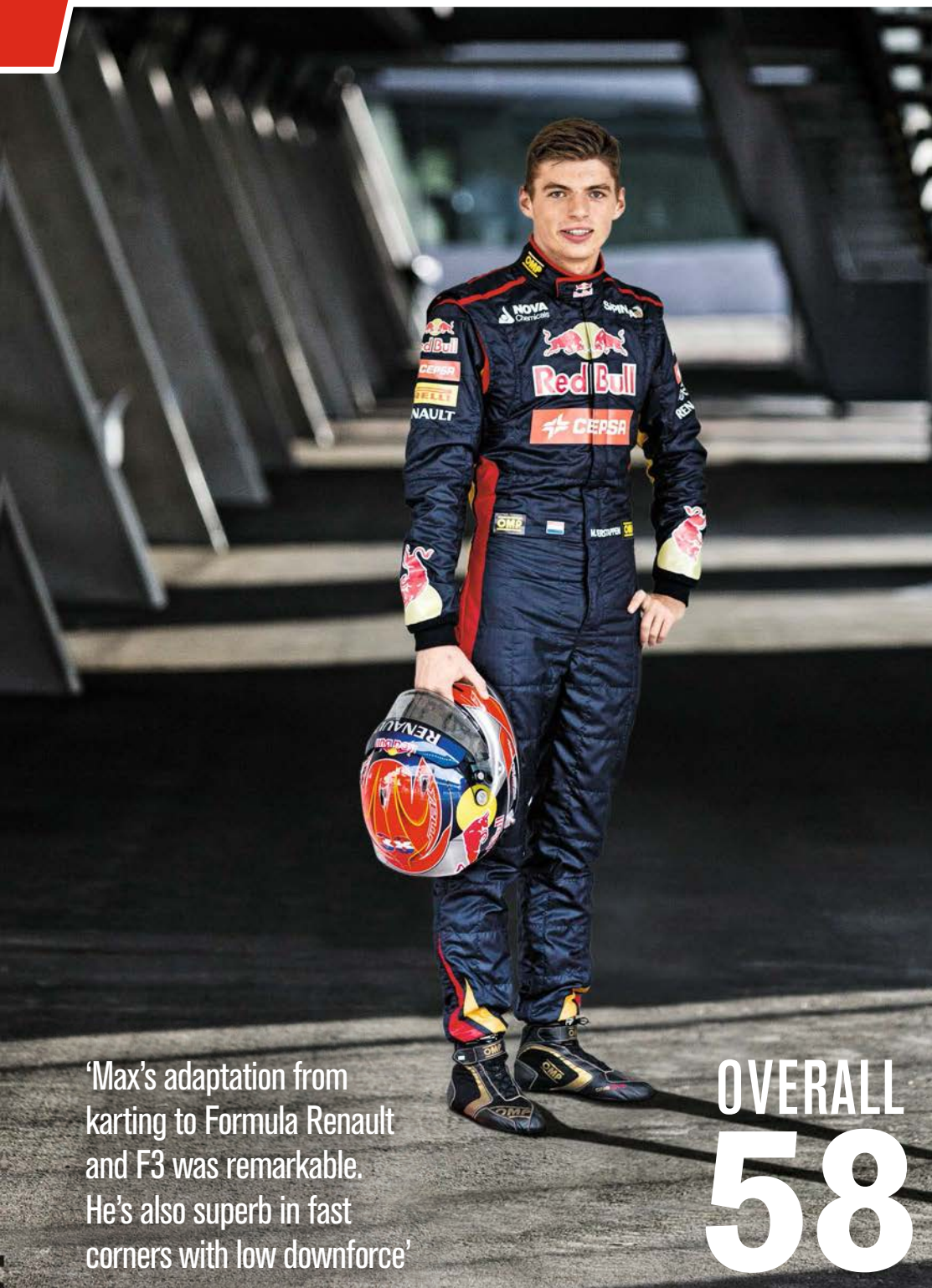


OVERALL
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'McLaren-groomed Magnussen set the bar high. Sainz's job was to pick up where the Dane left off. And he did, competently'

MAX VERSTAPPEN

MARCUS SIMMONS evaluate the relative strengths of two very exciting young talents



'Max's adaptation from karting to Formula Renault and F3 was remarkable. He's also superb in fast corners with low downforce'

OVERALL
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MAX VERSTAPPEN

Max Verstappen has arrived in Formula 1 with just one season in cars, comprising 48 races, under his belt.

But that's been enough for him to be talked about as the most exciting driver in a generation. The son of 1990s Dutch F1 hero Jos Verstappen (and Belgian karting ace Sophie Kumpen), he cleaned up in karting, and took his first car-racing steps in the Florida Winter Series before his rookie Formula 3 season.

It's not so much his record of success that marks him out, more the way he goes about his driving. F1 is about to realise just what a special talent he is.

SPEED 8

His pole record in European F3 last year didn't match his wins. Grid penalties aside, he would have earned top spot six times against the 15 of champion Esteban Ocon and seven of runner-up Tom Blomqvist.

ADAPTABILITY 8

Difficult to tell yet after one season. Also, such is the nature of F3's Hankook tyres that the race balance doesn't change much. Still, adaptation from karting to Formula Renault (in testing) and F3 was remarkable.

RACECRAFT 9

Sensational. He took 10 race wins from seven poles in F3, and just as impressive was his drive from 11th on the grid to P2 at hard-to-pass-on Imola. But he isn't entirely error-free, as Macau GP crash that probably cost him victory attests.

WET-WEATHER CAR CONTROL 10

He did five laps in the wet in qualifying at Norisring that were all faster than anyone else's best, the quickest by 1.4s (on a sub-minute lap)! Also superb in fast corners with low downforce, the key to his Spa wins.

TECHNICAL 8

Combined extremely well with Van Amersfoort Racing engineer Rik Vermooij last year. The team's staff is talented, but with no genuine top-liner to date it must have been lacking in the data available to rivals. It didn't matter to Verstappen.

CHARACTER 9

The Van Amersfoort team has nothing but praise for his attitude. Verstappen spearheaded the team's attack and was generous in his help of his team-mates. Also one of the friendliest guys in the paddock, happy to chat to most of his rivals.

18+ MATURITY 6

Remarkable for a 17-year-old, but can get angsty about officials' decisions – sometimes justifiably, sometimes not – whereas an older rival would likely shrug them off. Got into a right mess of bad decisions at Imola last year, too.



REAR PACKAGING

The bodywork is a little more tightly packaged than last year thanks to the improved cooling set-up of the Ferrari power unit. This should offer an aerodynamic gain.



ENGINE

The Ferrari engine has improved, so Sauber will gain from that. Last year there were occasions when you saw brief flashes of potential from Sauber, but the problem was that the car would be dramatically different from session to session. That has to be tackled. Work needs to be done on ensuring the brake-by-wire and engine driveability are optimised, since that was an area of weakness last year. None of this costs huge sums of money, just time and brainpower, but if Sauber has an aerodynamically stable car with a decent level of downforce, it has to focus on getting the rest of the car working well.



WEIGHT

Last year Sauber struggled with weight. This year the increase in minimum weight, combined with relatively light drivers, means that won't be a problem. That is, in effect, free laptime.



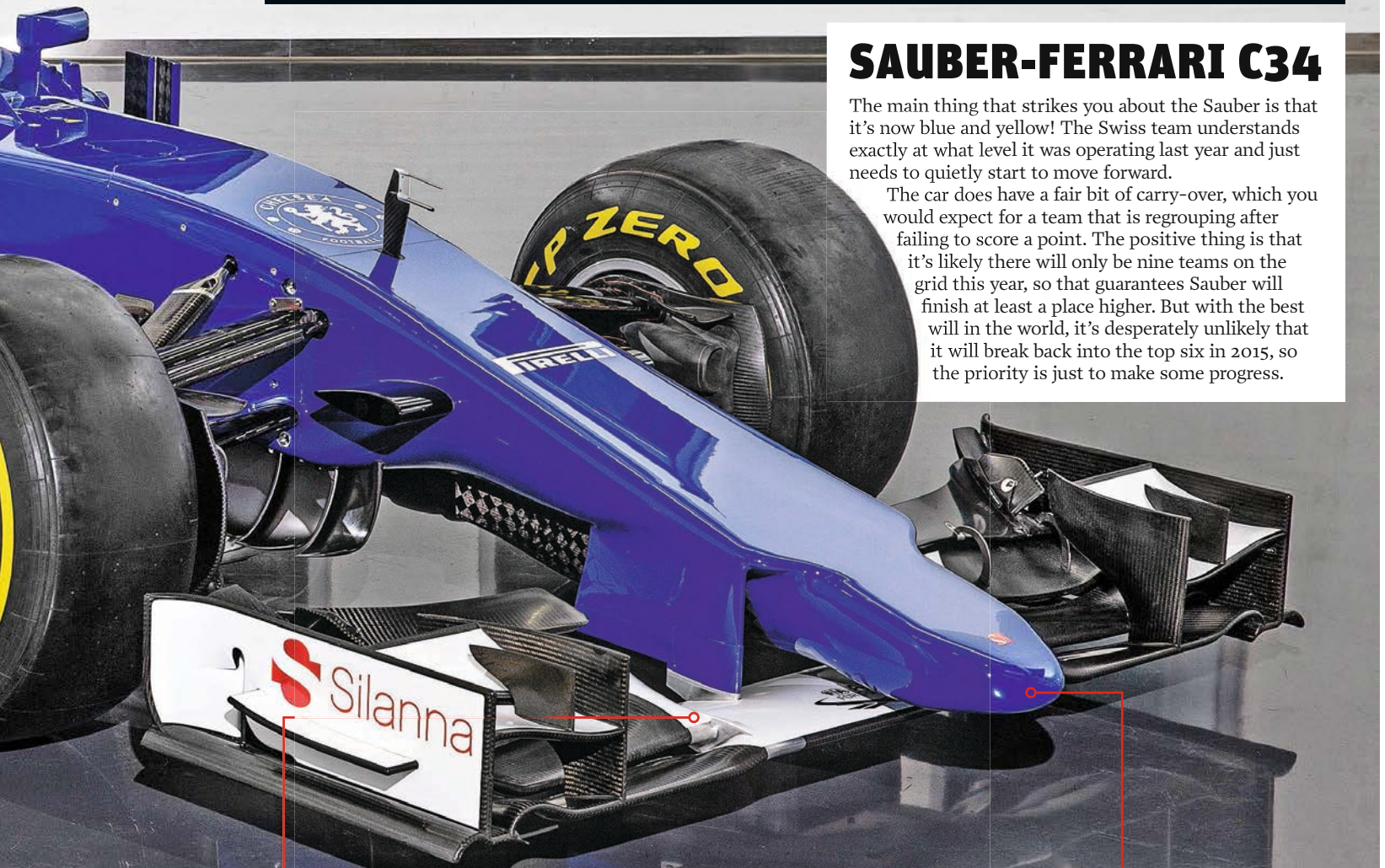
Progress required, not just on livery

After a point-less season the pressure is on to improve, says **GARY ANDERSON**

SAUBER-FERRARI C34

The main thing that strikes you about the Sauber is that it's now blue and yellow! The Swiss team understands exactly at what level it was operating last year and just needs to quietly start to move forward.

The car does have a fair bit of carry-over, which you would expect for a team that is regrouping after failing to score a point. The positive thing is that it's likely there will only be nine teams on the grid this year, so that guarantees Sauber will finish at least a place higher. But with the best will in the world, it's desperately unlikely that it will break back into the top six in 2015, so the priority is just to make some progress.



FRONT WING

If you look at the front-wing main plane of all F1 cars, there's a central section that is very simple. At the transition between this and the outboard sections on either side of the car, teams have a vortex-generator. I would question the shape of Sauber's as it's a very dramatic step. This will create a bigger vortex, and I'd be surprised if it can create a vortex that's big without it being prone to stalling. You may get peakier downforce thanks to the large vortex working hard, but it's going to be difficult to control.



NOSE DESIGN

Sauber has exploited the anteater nose concept further than anyone else. It protrudes forward more or less like on the SF15 T, but Ferrari doesn't step it back to the wing pillars. Sauber has kept it as narrow as possible and as deep as the regulations allow.



NASR AND ERICSSON: MORE THAN JUST PAY DRIVERS

Sauber has signed two well-funded drivers for 2015. But there's more to both of them than meets the eye. By **ADAM COOPER**

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A fresh look and two new drivers mean it's all change at Sauber this year, but amid the usual launch-season optimism there's no escaping the fact that this is a critical year for the Swiss team, and its very survival remains in the balance. Last year it failed to score a point, and slipped to 10th in the championship, losing out to Marussia.

The backdrop to that poor performance was a financial squeeze, and at the end of last season the team held what amounted to an auction for its two 2015 seats. Out went Adrian Sutil, who had an ongoing contract but was on a salary, so represented a drain on resources. Gone too was Esteban Gutierrez as the team ended its relationship with the Mexican backers who had been on board since 2011. And having invested a lot of cash to use the third-driver role as a springboard to a race seat for 2015, Dutchman Giedo van der Garde found that he had, in effect been outbid for a place.

As noted, it was a simple matter of survival – Sauber urgently needed cash, and both Marcus Ericsson and Felipe Nasr were able to provide it.



Paid driver Adrian Sutil has been let go for 2015

THOMPSON/GETTY



Sauber's 2014 season went up in smoke

But while money may have been the prime motivator in deciding the line-up, it would be a gross injustice to dismiss either man as a pay driver. Both made mercurial progress early in their careers, only to plateau – as so many do – when they got stuck in GP2. They both now face the challenge of proving at F1 level that they are as talented as their early careers suggested.

Ericsson is a step ahead of his new team-mate simply because he has already enjoyed a learning year with Caterham. After an unspectacular start he made good progress in his last few races, before the team hit the buffers. He may have brought substantial backing, but those performances helped cement the deal with Sauber, and re-establish him as a man to watch.

"I'm pretty sure that without those three races we wouldn't have a deal for this year," says Ericsson. "So it was extremely important. It was a combination of things. We had problems all year with the braking for me, and the team started to listen to me a bit more when the new owners stepped in, and it was easier to get my

ideas across about set-up and stuff like that. Also you gain experience all the time, and when you have a good race, you get a boost from that.

"My years in the junior series, if you don't look at GP2, were very, very good. I'm still not happy with my GP2 years because I think I had the speed to be fighting for a championship, but for particular reasons, that never happened. I had good runs in different years, but I never managed get the whole year together."

The first to be signed for 2015, Ericsson was able to get to know the team with a couple of days of testing after the last GP in Abu Dhabi in November. He admits that it's hard to judge the potential of the new package.

"It's difficult to say, but everyone seems very positive and upbeat about the new line-up for this year. The facilities are amazing, there's a lot still there from the BMW era, so they have all the tools. There are clever guys there as well, so I see potential, and as a team we need to target being in the midfield. Last year was not good for Sauber, but one year back, they were regularly in



Nasr (left) is a year behind Ericsson but is keen to catch up

the points.”

Sauber was let down by Ferrari in 2014, both in terms of performance and reliability. The Italian power unit will be one of the keys to the season: “If Ferrari can take a couple of steps, and Sauber as well, I think we can be in a good position,” adds Ericsson. “If you look at the last couple of races the team was making progress. Adrian was in Q3, and they were getting a lot stronger, which for me is promising.”

Managed since his early days by Steve Robertson, the man who steered Kimi Raikkonen’s career, Felipe Nasr won titles in Formula BMW Europe and British F3 before his arrival in GP2. Last year, his third in the category, he won four races – although three were Sunday sprints. Meanwhile he gained his first F1 experience as reserve driver at Williams, logging five FP3 sessions and three test days.

Nevertheless, other guys have leapfrogged him, and he still has a lot to prove. In terms of perception the problem is that his new teammate is not an established name.

“I want to do the best I can and put my name with other Brazilians in F1 history” FELIPE NASR

“It’s always nicer as a driver to have a good reference,” says the Brazilian. “When you have someone who has a bit more experience, who has been in every kind of situation, that brings a big plus to a team. I think Marcus has something to bring to the table as well, he did one year in F1, so I’m sure he’s able to add something. But it’s not the first time I see Sauber doing that, bringing in new drivers at the same time. I’ll be there to do everything I can to improve things.

“I know they had a difficult year, and they need better support. But if you look at their history they’ve always been a team that was able to put in some good results. They know what it takes to make it. I’m sure if they have all the ingredients they will be able to put together a good package.”

He knows that the pay-driver tag will be hard to overcome: “I think a good driver means good sponsors. It makes sense. I’m happy to have these companies by my side. At the end of the day I’m a professional race driver, and I’m being paid to drive.”

There’s always huge pressure on any Brazilian driver who makes it to F1, and high-profile backing from a state-owned bank will put Nasr further in the spotlight. Meanwhile the presence of Ayrton Senna’s former physio Josef Leberer at Sauber provides a link to the past.

“First of all, to arrive in F1 is one thing, to be successful is another. I’m aware of that, and I just want to do the best I can and learn as much as I can, and maybe one day put my name together with the other Brazilians in history.”



CARLOS



THE BIG PICTURE

Better reliability has been one of Toro Rosso's targets over the winter – and Carlos Sainz completed 46 laps on the first day at Jerez before halting. An encouraging sign?

Photographer Glenn Dunbar/LAT





Nissan: We're not just trying to be different

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A front-engined, front-wheel-drive hybrid LMP1 car? There are sound reasons, claim the programme's architects. GARY WATKINS finds out more about the GT-R LM NISMO

Maximising aerodynamic efficiency was the driving force behind the very unusual front-engine, front-wheel-drive concept of Nissan's new GT-R LM NISMO World Endurance Championship contender.

The Japanese manufacturer's global motorsport boss Darren Cox claims that the mould-breaking design was a reaction to an LMP1 rulebook that tightly controls aerodynamics at the rear of the car, but offers much more freedom at the front.

"The aero regs at the back of the car are so tight that there isn't much you can do," he said of Nissan's first challenger for outright honours at the Le Mans 24 Hours since 1999. "If you look at the front of the car there are a lot of clever aerodynamics.

"The whole concept of the car is about maximising aerodynamic efficiency by moving the centre of pressure forward."

Shifting the weight and aero loads towards the front also offers

benefits for a high-powered hybrid P1 in terms of grip, explains GT-R LM technical director Ben Bowlby: "We have moved the weight bias forward to give us traction."

This has allowed Nissan to opt for nine-inch Michelins at the rear in comparison to conventional 14-inch fronts, the tyre size used all round by its rivals. "We've moved the capacity of the tyres forward to match the weight distribution," says Bowlby.

The front location of the engine and tight packing of the car's cooling system has allowed Bowlby, creator of the DeltaWing that raced at Le Mans in 2012, and his team to take more air through the sidepods of the car than a conventional rear-engined design would allow. Spy shots of the car reveal a major outlet for airflow, which runs over the mandatory flat-bottom floor, above the fixed-size rear diffuser and the high rear deck.

Cox insists that Nissan had not chosen to be "different for different's sake", but points out that there was "an open mindset



Bowlby (left) also designed DeltaWing

"We had a clean sheet of paper and looked at every solution. And our numbers support the one we have come up with"

DARREN COX

and the support of the company to go and do something different".

"We had a clean sheet of paper and looked at every solution," he says. "And our numbers support the one we have come up with."

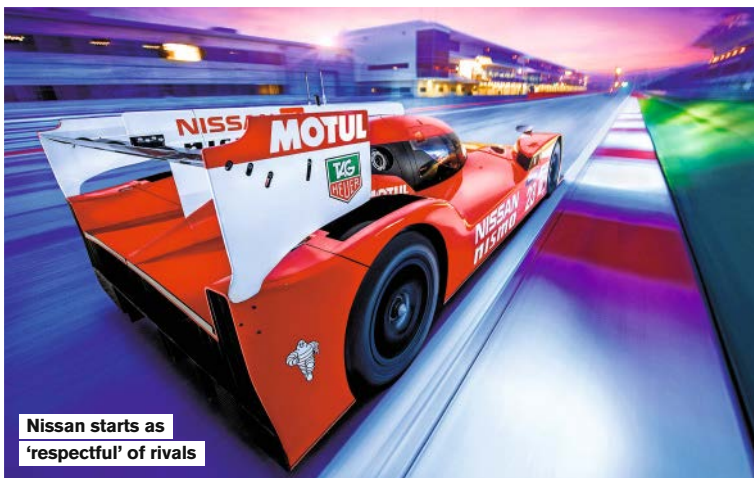
FRONT-WHEEL-DRIVE DECISION

Bowlby and his staff evaluated a front-engine, rear-drive concept, before deciding that the internal-combustion element of the car's powertrain should power the front wheels in the interest of weight saving.

"It is very difficult to build an eight megajoule P1 car down to the 880kg weight limit [which is up 10kg on last year]," explains Cox. "Achieving that if you are putting a big propshaft through the car and a differential on the back is even more difficult."

HYBRID SPEC REMAINS SECRET

Nissan has not revealed full details of the GT-R LM's hybrid systems, only that it will retrieve from the front axle. Nor has it said which of the four sub-classes of energy



Nissan starts as 'respectful' of rivals



Gearbox is mounted ahead of the engine



GENE BRINGS EXPERIENCE

Former Le Mans 24 Hours winner Marc Gene was the only driver announced for Nissan's two-car assault on the full WEC, which will be bolstered by an additional car at Le Mans. The Spaniard, who joins the Japanese manufacturer after two years as Audi's reserve driver, is described as a "major asset" to the GT-R LM programme by Darren Cox.

"Marc has experience of two major LMP1 programmes with Peugeot and Audi, so he will bring us a lot of experience," he says. "He's also very excited to be racing with us in the full WEC."

Nissan chose not to reveal further drivers on the launch of its return to top-flight sportscar racing with a TV



commercial during the broadcast of last weekend's American football Super Bowl extravaganza and a simultaneous virtual release. Nor has it set a timescale for the announcement of further names, although at least two more will be made public today (Thursday) when the entry lists for Le Mans and the WEC are released. Manufacturers and teams must nominate at least one driver per car at this stage.

Nissan has made much of its involvement in LMP2 as an engine supplier and declared its intention to promote successful drivers using its V8s in the junior prototype category. Olivier Pla, who has long been rumoured to be set to become a Nissan driver, could be one of the names released with the entry lists.

Others set to race the car this year include Jann Mardenborough, a winner of Nissan's GT Academy gamer-to-racer scheme and a GP3 racer last year, and Satoshi Motoyama, a veteran of the marque's experimental programmes with the DeltaWing and ZEOD RC at Le Mans. A change in the Super GT calendar to free up the Le Mans Test Day weekend will allow Nissan to bring in a roster of its drivers from the Japanese series for that race.

return the car will run in, although the rhetoric suggests that it is aiming for the top division that allows eight megajoules of power to be returned to the track around the 8.47-mile Circuit de la Sarthe.

Nissan will retrieve kinetic energy from the front wheels like rivals Toyota, Audi and Porsche, but Cox is not saying if there is also a rear-axle system. It is understood, however, that there is provision for recovery from the back wheels and that there is space for a driveshaft running through the monocoque.

Rear shots of the GT-R reveal no driveshafts, but it is understood

that these are raised clear of the secondary tunnels in the interest of smooth airflow and drive through drop-down gears on the top of the uprights.

It is known that the storage system is a version of flywheel developed by Flybrid and used in the Hope Racing ORECA-Lehmann 01 at Le Mans in 2011 and tried by American Le Mans Series team Dyson Racing on one of its Lola-Mazdas. This system, which is entirely mechanical, is now supplied by UK transmission specialist Torotrack after its acquisition of Flybrid.

It is understood that the GT-R has a twin-flywheel system located in the survival cell, as mandated by the regulations, and sitting at the front of the monocoque. This is fed by a driveshaft from the front axle, which is understood to run through the V of the engine, and potentially from the rear as well.

THE COMBUSTION ENGINE

The three-litre twin-turbo V6 combustion unit, which sits in an in-line position with the gearbox on the front, is "a Nissan/NISMO-developed engine", according to Cox. He has talked about a "B supplier"

in the past and it is no secret that the engine is the work of Cosworth in the UK.

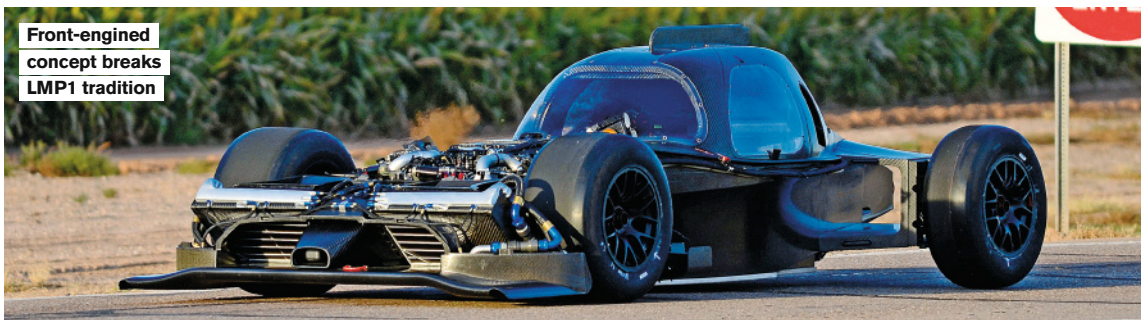
TARGETS IN YEAR ONE

Cox has further tempered the bold statements from former Nissan vice-president Andy Palmer, now boss of Aston Martin, at the announcement in May last year of Nissan's return to the top flight of sportscar racing. Back then, Palmer suggested that Nissan could win Le Mans in its first year.

"We need to be respectful of the experience and quality of our competition," says Cox. "Our aim is to be credible and to get to the finish at Le Mans and see where we come. Based on last year's numbers we are going to be credible on pace, but until the flag drops we won't know, and I'm really talking about when Le Mans starts. Up to then, there is going to be a lot of kidology."

The focus for Nissan in the first half of the season will be on Le Mans. "That was what Porsche did last year," says Cox. "Any new manufacturer has got to do that." ❧

Front-engined concept breaks LMP1 tradition





MacLeod leads Eastwood at the damp start

E. JUAN CAMERON

TOYOTA RACING SERIES HAMPTON DOWNS (NZ), JANUARY 31-FEBRUARY 1 RD 3/5

MacLeod scores in Scottish weather

SAM MACLEOD TOOK HIS FIRST Toyota Racing Series win with a commanding victory in the feature event at Hampton Downs, the historic New Zealand Motor Cup. The Edinburgh racer won the start from second on the grid, thanks partly to being on the drier side of a damp track, quickly pulled a gap and held it to the end, winning by 6.5 seconds from championship leader Lance Stroll of Canada. "Deciding on slicks was a close call," MacLeod said. "But with two formation laps we got some heat in the tyres and I made a decent start. "It was good being in the lead but I made a mistake in the middle of the race and for the last third I just

concentrated on keeping control." MacLeod, who is expected to race in the Formula 3 European Championship this season, has been fast all through the first three rounds of the TRS but has suffered a series of setbacks. One such came in the opening heat as MacLeod was applying great pressure to Indian driver Arjun Maini, but bent a pushrod when he hit a kerb. Maini went on to win the race. French driver Brandon Maisano was second in that race, with American Santino Ferrucci third and English karting graduate Callum Ilott achieving his best finish of the series in fourth, his car now reliable after earlier problems.

Race two was run in heavy rain, the cars sending up big clouds of spray. Ferrucci led much of the race but slid back to third – he had gone out on wet-weather tyres but with a full-dry set-up. Maisano and Austrian Ferdinand Habsburg both passed the struggling Ferrucci, who nevertheless moved smartly up the points table with a trio of top-five finishes. "My car was very good, the set-up was perfect," Maisano said after his victory. "Visibility was very difficult when I was behind Ferrucci but it was easier after I passed him." BRDC Formula 4 runner-up Maini, Ferrari protege Stroll's main challenger for the championship, was forced out after tangling

with Russian GP2 regular Artem Markelov. Belfast driver Charlie Eastwood finished 12th, 14th (with a time penalty) and 15th. ● Bernard Carpinter

RESULTS
Race 1 1 Arjun Maini, 11 laps in 12m33.853s; 2 Brandon Maisano, +2.581s; 3 Santino Ferrucci; 4 Callum Ilott; 5 Damon Leitch; 6 James Munro.
Race 2 1 Maisano, 15 laps in 21m57.898s; 2 Ferdinand Habsburg, +6.794s; 3 Ferrucci; 4 Mathias Kristensen; 5 Lance Stroll; 6 D Leitch.
Race 3 1 Sam MacLeod, 20 laps in 21m00.008s; 2 Stroll, +6.466s; 3 Maisano; 4 Maini; 5 Ferrucci; 6 Artem Markelov. **Points 1 Stroll, 515**; 2 Maini, 460; 3 Maisano, 429; 4 Ferrucci, 399; 5 Habsburg, 350; 6 Munro, 325.

66

NZ SUPERTOURERS HAMPTON DOWNS (NZ), JAN 31-FEB 1 RD 4/7

Evans wins from Evans

GP2 RACE WINNER MITCH EVANS made a surprise appearance, and it was a successful one. Driving a borrowed Holden, Evans finished second for the round behind older brother Simon, who won all three races. "I'd never driven a tin-top until Friday and I'd never driven it in the wet 'til this afternoon's race," Evans Jr said. "It's good to prove I can be quite a versatile driver." In both Sunday races Evans Sr

established an early gap, but his brother gained speed and narrowed the gap later in the race. Podiums were shared by Aussie Tony D'Alberto and Kiwis Tim Edgell and Andre Heimgartner. ● Bernard Carpinter

RESULTS
Race 1 1 Simon Evans (Holden Commodore), 15 laps in 16m20.587s; 2 Andre Heimgartner (Holden), +1.532s; 3 Tony D'Alberto (Holden); 4 Mitch Evans (Holden); 5 Mitch Cunningham (Ford Falcon); 6 Dominic Storey (Ford).
Race 2 1 S Evans, 15 laps in 19m01.036s; 2 M Evans, +0.644s; 3 Tim Edgell (Holden); 4 Cunningham; 5 Shaun Varney (Ford); no other finishers. **Race 3 1 S Evans**, 20 laps in 26m01.417s; 2 M Evans, +1.095s; 3 Heimgartner; 4 Storey; 5 D'Alberto; 6 Edgell.
Points 1 S Evans, 1357; 2 Heimgartner, 1132; 3 Shane van Gisbergen, 1102; 4 Tim Slade, 973; 5 Edgell, 962; 6 Richard Moore, 951.



Mitch Evans on tin-top debut

ANDROS TROPHY SUPER BESSE (F), JANUARY 31 RD 6/6

Panis can't quite topple Dayraut

A LATE-SEASON RUN OF SCORCHING form for Olivier Panis left the ex-Formula 1 star just shy of the title after the single-race finale. With dropped scores taken into account, Panis – who won both heats and then dominated the final in his WRT-run Toyota – fell just a point short of depriving Jean-Philippe Dayraut of a sixth crown. The critical moment came at the start of the final, with Dayraut spearing his Mazda past Jean-Baptiste Dubourg and into the fourth place that gave the necessary extra point to become champion. Franck Lagorce kept his Dacia in second place throughout the final, with the Mini of Bertrand Balas on



Dayraut king of the snow again

his shoulders, then Dayraut and Dubourg just behind. In the electric field, GP2 stalwart Nathanael Berthon absolutely crushed his opposition in the final, winning by eight seconds from Lagorce and claiming the title. Lagorce took second in the points from Aurelien Panis.

RESULTS
1 Olivier Panis (Toyota Auris), 6 laps in 4m45.969s; 2 Franck Lagorce (Dacia Lodgy), +5.937s; 3 Bertrand Balas (Mini); 4 Jean-Philippe Dayraut (Mazda 3); 5 Jean-Baptiste Dubourg (Renault Clio 3); 6 Benjamin Riviere (Citroen DS3). **Points 1 Dayraut, 500**; 2 Panis, 499; 3 Lagorce, 489; 4 Riviere, 465; 5 J-B Dubourg, 451; 6 Balas, 426.

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Silverstone – 3rd place
Imola – 3rd place
Red Bull Ring – 3rd place
Hungary – 6th place
Paul Ricard – 5th place

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Le mans – 12th in class

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Tandy ran at Brands

HAWKINS

EBREY

Fortec brought in Rowland at Rockingham

SCOTT MITCHELL
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scott.mitchell@haymarket.com
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LAST WEEK WAS IMPORTANT

for MSA Formula. The biggest question mark over the series was whether French constructor Mygale could turn around the first batch of 15 chassis for the start of 2015.

It seems to have met that target. The likes of Arden International are in the process of prepping for their first runs, but champion British Formula Ford team JTR and international single-seater powerhouses Carlin and Fortec Motorsport have stolen a march on their rivals already.

Tests at Brands Hatch and Rockingham gave that trio of teams a chance to get an early feel for their FIA F4 racers. Granted, cold conditions and basic installation requirements probably limited meaningful running, but any laps completed are mileage in the bank.

Unsurprisingly, JTR boss Nick Tandy opted to shake down his team's car, while Formula Renault 3.5 race winner Oliver Rowland joined the Porsche factory driver in swapping his usual mount for the most junior of single-seater racers when he tested Fortec's machine at Rockingham.

Tentative feedback was the order of the day but it's another step in the right direction for the new series.

It's rival, BRDC Formula 4, is more or less matching it in terms of drivers confirmed thus far, and also bagged a title sponsor in Duo as well.

That suggests that the two categories are, at this stage at least, satisfying the demand of their young audience. But we're still only halfway to strong grids for each, and different people are telling different stories of woe on either side. Ultimately, we're weeks away from a clearer picture.

New F4 Mygales hit the track

Top teams JTR, Fortec and Carlin shake down MSA Formula cars

LEADING BRITISH SINGLE-seater teams JTR, Fortec and Carlin shook down their Mygale-built MSA Formula cars last week.

All three teams have responded positively to the championship's new FIA F4-specification car after testing for the first time at Brands Hatch and Rockingham.

The first batch of 15 cars was delivered to customers last month, with teams beginning to test with the French-built chassis and Ford EcoBoost engine.

World karting champion Lando Norris and team-mates Colton Herta and Petru Florescu all sampled Carlin's car, and its MSA Formula team manager Martin Knapman said first impressions were good.

"Mygale has built a very good car," said Knapman. "We spent three days at Rockingham ironing

out any early handling issues the drivers may have had. The car, as you'd expect from a junior single-seater, has a low level of downforce which produces less grip. So the car moves around a bit, which is good for the category as it allows the drivers to learn significantly."

Formula Renault 3.5 race winner Oliver Rowland helped the Fortec squad begin its testing schedule, with top karters Daniel Ticktum – who has also tested for BRDC Formula 4 team Lanan Racing – and Racing Steps Foundation-backed Josh Smith in attendance.

Rowland praised the speed of the car as well as its ability to handle well in fast corners.

"I've been quite surprised at just how quick the car is," he said. "It slides through corners, such as Pif-Paf at Rockingham, quite similarly to the old [Tatuus-built]

BARC Renault car, without snapping on you like the more modern two-litre Renault can do. It gave me a good feel of mechanical grip. I was really pleased with the Hankook tyres. They were able to last a long time.

"Mygale and Ford need to work on a couple of early issues which we've encountered, but the car will produce good junior racing, which we've needed in this country."

JTR's new signing James Pull drove the car for the first time at Rockingham after team boss and Porsche factory driver Nick Tandy shook down the car at Brands.

"The car has a good amount of torque thanks to the turbo," said Tandy, whose team ran the last three British Formula Ford champions. "The cars will still be moving around on the limit, which is exactly what we wanted."

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Fannin and Jarman will race a Eurostar-liveried Aston Vantage

British GT

Fannin in British GT return with TF Sport

FORMER GT4 CLASS CHAMPION

Jody Fannin will race a TF Sport-run Aston Martin Vantage V12 GT3 in the British GT Championship this year.

Fannin, 21, will partner GT4 race winner Andrew Jarman behind the wheel of the Eurostar-liveried machine, joining the team's previously confirmed pairing of Matt Bell and Derek Johnston.

Fannin has raced sporadically since

taking GT4 class honours in 2012, including a victorious outing with TF Sport in the International GT Open round at Silverstone last year alongside Aston Martin factory driver Darren Turner.

"It's a brilliant feeling to be back racing against such a quality field," said Fannin, whose last British GT outing was in early 2013 racing a JRM-run Nissan GT-R.

"We're hoping to run at the sharp end,

but we're not setting ourselves any firm targets yet. It was good to get some experience of the car last year and benefit from Darren's knowledge, but we haven't done any testing since then."

Fannin, who also made a Blancpain appearance in a Bentley Continental in 2014, hopes to use his British GT return as a springboard to greater things within the sportscar racing discipline.

"Winning Le Mans has been my ambition since I was young, and my association with Aston Martin is a good thing to have in that regard," he said.

Meanwhile, Rosso Verde has confirmed its return to British GT this season for selected rounds, with team boss Hector Lester and Benny Simonsen, younger brother of the late Allan Simonsen, once again sharing a Ferrari 458 Italia GT3.

BRDC Formula 4

Fonseca moves to Lanau for sophomore F4 season

CHAMPION BRDC FORMULA 4

team Lanau Racing has signed Mexican Rodrigo Fonseca for the 2015 season.

Fonseca, who is backed by the Escuderia Telmex scheme that supported Force India Formula 1 driver Sergio Perez's rise through the single-seater ranks, made his BRDC F4 debut last season with the Douglas Motorsport squad.

The 18-year-old finished 13th in the points with a best result of fourth place, before going on to finish third with two wins in the Winter Series.

Lanau team boss Graham Johnson, whose squad ran Jake Hughes and George Russell to the first two BRDC F4 titles, says he wants to see greater consistency from Fonseca.

"I think we can get more out of him," he said. "Our set-up seems to work quite well, we can give our drivers a good car and driver coaching; we've got a nice little formula.

"I'm hoping he'll blossom a little bit more with us."

Fonseca was third in the F4 Winter Series



Renault Clio Cup UK

Stilp aiming to "thrash" Clio Cup rivals on 20Ten return

JORDAN STILP WANTS TO

"thrash" his Renault Clio Cup UK opposition after confirming his return to the series with 20Ten Racing.

The 20-year-old took three wins in his maiden season in the series in 2014, dominating the double-header at Croft on his way to third in the points, and is entering his second Clio Cup season brimming with confidence.

"I'm going out to win it and nothing else," said Stilp. "I feel like I'm going

Confident Stilp is eyeing Clio title



to be the champion – when we roll up for the first two races at Brands Hatch I want to hit the ground running and thrash everyone."

Team principal Simon Hunt added: "The way Jordan won at Croft last year was extraordinary. That really was a turning point and he was so strong after that.

"If his first half of the season had been like his second half, he would have been champion, and I believe this will be his year."

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British GT

British GT to be broadcast live on Motors TV in 2015

FIVE ROUNDS OF THIS YEAR'S

British GT Championship will be televised live on Motors TV. The series has grown for several years under the promotion of the Stephane Ratel Organisation, but none of its 2014 rounds received live coverage.

Ratel had targeted full live coverage in 2015 and, although that was not possible, all but the season-opening Oulton Park races and Spa-Francorchamps round will be broadcast live.



British GT wasn't shown live on TV in 2014

Series manager Benjamin Franassovici said: "The championship has grown significantly over the last five years or so and the final piece in the jigsaw was to add regular live TV coverage.

"It's something we've underwritten at some rounds in the past, but given the level this championship is now at it became increasingly clear over the course of last season that our teams and drivers saw the additional exposure as an important marketing tool."

The series has already reached the maximum entry for the Oulton double-header, with a near-even split of GT3 and GT4 cars, and Franassovici said the TV deal would reward those who have stood by the championship.

Regular highlights will also be shown on Channel 4 and Motors TV, one week after each race weekend.

Ginetta GT5 Challenge

Kellett joins GT5 Challenge

GINETTA JUNIOR RUNNER-UP

James Kellett will switch to Total Control Racing as he graduates to the Ginetta GT5 Challenge this season.

After finishing second behind Jack Mitchell in last year's Junior series with HHC Motorsport, the 16-year-old will lead TCR's bid to repeat the GT5 Challenge crown won by George Gamble last year.

"I've got my sights set on GT and sportscar racing in the future, so this is the

perfect next step," said Kellett, who joins Challenge podium finisher Callum Pointon in TCR's line-up. "I was disappointed not to win the Ginetta Junior title last year, but we're only looking forward.

"The aim is to win the championship in my first season and I know TCR will give me a car capable of fighting for the title."

TCR boss Lee Brookes added: "James is mega quick – we know he has what it takes to win the title."



Kellett (13) was runner-up in Juniors last season

Formula Ford 1600

Bridger starts FF1600 team

SOMETIME BRITISH FORMULA 3

driver Jay Bridger will return to racing full-time this season after forming his own Formula Ford 1600 team.

Bridger Motorsport will run a pair of Mygales in the FF1600 National series, the 2008 National Class champion assuming driving duties in what will be his first full season of competition since his final British F3 campaign in 2010 for Litespeed.

"I haven't been racing for a while and I wanted to get back into it," said Bridger. "I wasn't going to race initially, but we got the backing and the team has a lot to learn, so I thought it'd be easier to drive myself."

Speaking of his longer-term aspirations

for his eponymous team, which will be employing some of the same personnel from Bridger's F3 days, the 27-year-old added: "The idea is to start off at this level and see where we go. I want to build something for the long-term."



Bridger raced in British F3 in 2010

HUMBLE PYE

The voice of club racing



750 Formula-winning Batten 3 was celebrated

The 750MC's core values shine on, 75 years later

With the benefit of hindsight, nobody would have founded a motor club in Britain in 1939. The stoic spirit that sustained the 750MC through to its first race meetings, based around cheap and available Austin 7-based cars, post-WWII was still nevertheless evident throughout its successful 75th-anniversary season.

I enjoyed Brands Hatch and three Silverstone events, and was delighted to work with fellow commentators Ian Sowman and Matt Suckling at last Saturday's 2014 awards dinner. More than 400 people congregated in Stratford-upon-Avon as racers from 10 championships and two series received their hard-won trophies.

Bikesports champion Adrian Reynard was the best known. The celebrated designer and eponymous marque chief – who raced a Radical SR3 with all the gusto I recall from his victorious 1979 Formula Ford 2000 Euroseries campaign – extolled the club's virtues as a training ground for youngsters.

The 750MC, where the DNA of many of racing's greatest car designers and engineers was seeded (Lotus founder Colin Chapman, Lola's Eric Broadley, Brian Hart, Arthur Mallock, Mike Pilbeam, Tony Southgate and Len Terry are among its stellar alumni) still encourages innovative thinking and provides wonderful opportunities for talented people.

F1 racer-turned-vehicle-dynamics authority John Miles recognised this, unveiling a new award won by Tony Batten for designing the "cleverly packaged" Batten 3 car in which Billy Albone won the 750 Formula title. John also praised Ian and Scott Mittell's home-built RGB

race-winning MC52B.

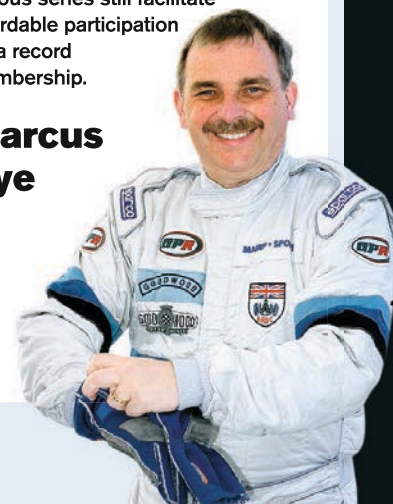
Also rewarded were individuals who went beyond the call of duty to support their club. Andy Bennett received the Chairman's Trophy for serving for 44 years on the rescue unit and Nigel Brown the Dave Bradley Memorial Trophy for championing Kit Car/Sport Specials racing for three decades, while Locost starlet Sian Stafford-Atkinson

"The 750MC moves with the times, but its core ethos still remains strong"

and husband John were lauded for pitching in whenever needed.

The 750MC portfolio has, out of necessity, veered away from the Austin 7 and Ford side-valve engines and underpinnings around which its initial 750 and 1172 Formula championships reshaped club racing more than 60 years ago. It moves with the times, but its core ethos remains. No racing has been 'low cost' for years, but the club's various series still facilitate affordable participation for a record membership.

Marcus Pye



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Attard shook down Stingray at Silverstone



In brief

NWSS mourns loss

One of the BARC North West Sports Saloon Championship's strongest supporters died last month after a short illness. Cam Forbes was a frontrunner since joining the championship in 2008 in his self-built Westfield and, having returned to the series last year after recovering from health issues, was awarded the series' spirit award. Our condolences to his family.

Aussie ace to MGs

Australian tin-top champion Cody Hill will compete in this year's MG Trophy series, taking over Chris Bray's race-winning ZR190. Hill travelled from Australia to compete at Silverstone in last year's MG Live event, finishing ninth, and is moving to the UK as he pursues his ambition to race in the British Touring Car Championship.

Barker gets Sacred

Former Porsche Carrera Cup GB ace Ben Barker will contest the Bathurst 12 Hours this month after securing backing from gourmet coffee supplier Sacred. Barker and New Zealander Jono Lester are the first two drivers to benefit from personal support from the company, best known as the UK series' hospitality coffee provider.

New series for VWs

A new race series for Volkswagen Group cars produced before 2003 has been launched within the Classic Touring Car Racing Club. The brainchild of long-time club racer Ken Lark and serial VW racer Ian Fowler, the VW Challenge will be a three-class series split by specification.

Century to GT Cup

Century Motorsport will field a pair of GT4-specification Ginetta G55s in this year's GT Cup. Team owner and long-time Ginetta racer Nathan Freke will partner Steve Fresle in one car, with occasional British GT driver Ollie Hancock joining Russia's Ruben Anakhayan in the sister machine.

Goodwood

Sims, Attard in historics debut

BRITISH GT CHAMPION MARCO

Attard and factory BMW driver Alexander Sims will share a Corvette Stingray in this year's Goodwood Members' Meeting.

Attard purchased the car in 2014 and intended to enter last year's Revival but it clashed with the Donington Park British GT finale. He has now entered the Graham Hill Trophy at the March 21-22 event, which will be both drivers' historic race debuts.

"It's very different to driving a Z4," joked Attard, who shook down the car at Silverstone last week and also owns a Ford Lotus Cortina he hopes to run at Goodwood at some point.

"It's been one of those dreams. I'd love to do the Revival, we couldn't do it last year and can't this year, but the Members' Meeting should be great fun."

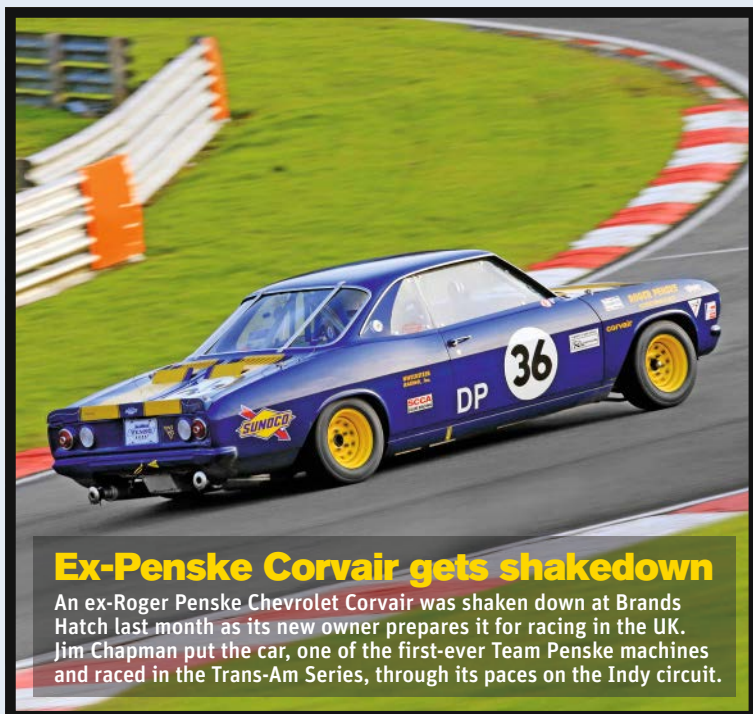
Former single-seater star Sims has limited experience in historic cars and

admitted he was "a little apprehensive".

"I've tested other cars and sometimes you do think, 'How did people race wheel-to-wheel in this?'"

"It will be a chilled-out weekend and a chance to experience something new."

British Touring Car race winner Mat Jackson (Triumph Dolomite) and 1992 BTCC champion Tim Harvey (Bizzarrini) will contest the Gerry Marshall and Graham Hill Trophies respectively.



Ex-Penske Corvair gets shakedown

An ex-Roger Penske Chevrolet Corvair was shaken down at Brands Hatch last month as its new owner prepares it for racing in the UK. Jim Chapman put the car, one of the first-ever Team Penske machines and raced in the Trans-Am Series, through its paces on the Indy circuit.

Ginetta Juniors

Zelos back for Junior title tilt

GINETTA JUNIOR FRONTRUNNER

Dan Zelos will return to the category this year after extending his deal with champion team JHR Developments.

Zelos scored two victories for the Derbyshire-based team last year in his rookie season, finishing fourth in the points, and now the 16-year-old is looking to build on his experience to become a regular race winner in his sophomore campaign.

"I'm a much stronger driver now than I was this time last year," said Zelos.

"The experience that comes with being a second-year competitor can't be underestimated. I feel really comfortable and settled at JHR, and that means we can focus straight away on the job."

JHR team boss Steve Hunter said he expected Zelos to challenge for the title from the very first round.

Historics

Historic Sports 2000 gets Croft HSCC date

FOLLOWING THE SUCCESS OF the Historic FF2000 category over the past eight seasons, the Historic Sports Car Club will run its first standalone race for Sports 2000 at the sixth annual Croft Nostalgia Weekend on August 8-9.

A joint venture with the Sports Racing Car Club, the 30-minute race will be a round of its Historic S2000 series for Pre-1983 Ford Pinto-engined chassis.

The SRCC's Colin Feyerabend said: "We want to entice out cars which have

not been raced in recent years."

HSCC chief Grahame White added: "If we produce a healthy grid and good racing, we could look to a double-header at one of our major meetings in 2016."



Pinto-powered series is off to Croft



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.5887
edd.straw@haymarket.com

DEPUTY EDITOR
Marcus Simmons ext.5807
marcus.simmons@haymarket.com

GROUP F1 EDITOR
Jonathan Noble ext.5810
jonathan.noble@haymarket.com

F1 ASSISTANT EDITOR
Ben Anderson ext.5425
ben.anderson@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

MANAGING EDITOR
Peter Hodges ext.5903
peter.hodges@haymarket.com

EXECUTIVE EDITOR
Stuart Codling ext.5835
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RALLIES EDITOR
David Evans
david.evans@haymarket.com

ART EDITOR
Lyndsey Row ext.5914
lyndsey.row@haymarket.com

SENIOR DESIGNER
Michael Cavalli ext.5381
michael.cavalli@haymarket.com

PHOTOGRAPHS
LAT Photographic

GROUP PICTURE EDITOR
Peter Mills ext.5918
peter.mills@haymarket.com

AUTOSPORT.COM TECHNICAL TEAM LEADER
Geoff Creighton
geoff.creighton@haymarket.com

AUTOSPORT.COM DEVELOPER
Tomasz Trznadel
tomasz.trznadel@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	Andrew van Leeuwen
Marcus Pye	Gary Anderson	

CORRESPONDENTS

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DISPLAY SALES MANAGER
Martin Lee ext.5389
martin.lee@haymarket.com

DISPLAY ADVERTISING
Gary Lee Hoebeck ext.5576
garylee.hoebeck@haymarket.com

Luke Ricketts ext.5961
luke.ricketts@haymarket.com

Don Rupal ext.5244
don.rupal@haymarket.com

CLASSIFIED SALES MANAGER
Jonathan Whitehead ext.5908
jonathan.whitehead@haymarket.com

CLASSIFIED ADVERTISING
James Hunter ext.5367
james.hunter@haymarket.com

Jamie Brooker ext.5271
jamie.brooker@haymarket.com

AUTOSPORT.COM SALES MANAGER
Fiona Bain ext.5551
fiona.bain@haymarket.com

AUTOSPORT.COM AGENCY ACCOUNT MANAGER
Jessica McFadyen ext.5820
jessica.mcfadyen@haymarket.com

ONLINE ADVERTISING
Leah Mimms ext.5846
leah.mimms@haymarket.com

SPECIAL PROJECT SALES
James Robinson ext.5284
james.robinson@haymarket.com

ADVERTISING DIRECTOR
Matthew Witham

LICENSING DIRECTOR
Jim James

PRODUCTION MANAGER
Ailsa Donovan ext.5639
ailsa.donovan@haymarket.com

PRODUCTION CONTROLLER
Abbey Gunner ext.5358
abbey.gunner@haymarket.com

SUBSCRIPTIONS
UK 0844 8488817
OVERSEAS +44 (0)1795 592 974
EMAIL autosport@servicehelpline.co.uk

BACK ISSUES
Tel: 0844 8488817

MARKETING MANAGER
Karen McCarthy ext.5658
karen.mccarthy@haymarket.com

LICENSING AND SYNDICATION
LICENSING MANAGER
David Ryan ext.5024

MANAGEMENT

GROUP DIRECTOR
Tim Bulley

GROUP COMMERCIAL DIRECTOR
Ben Guynan

GROUP EDITOR
Anthony Rowlinson

PUBLISHER
Stuart Williams

PUBLISHING MANAGER
Samantha Jemson

SPECIAL EVENTS MANAGER
Laura Coppin

DIGITAL SPECIAL PROJECT MANAGER
Simon Strang ext.5093
simon.strang@haymarket.com

DIGITAL PRODUCT MANAGER
Simon Grayson ext.5346
simon.grayson@haymarket.com

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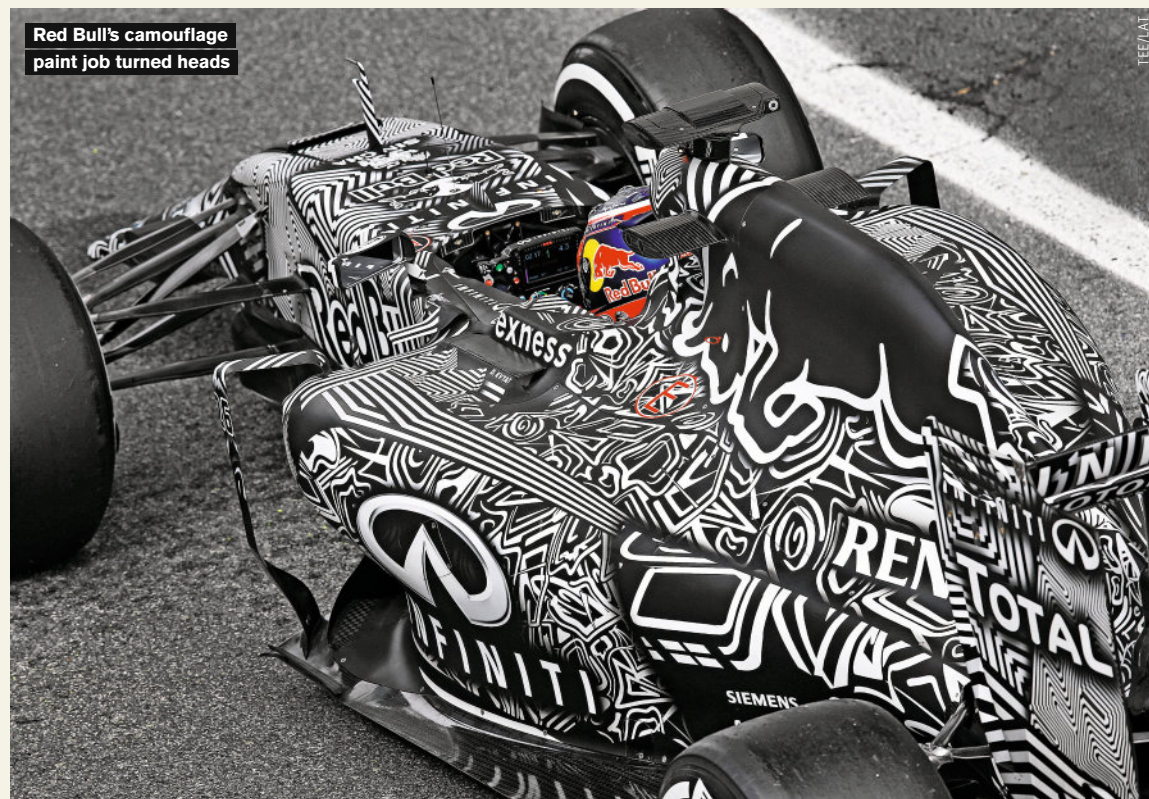
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THIS WEEK

LETTERS • ON TRACK • TV PICKS • FROM THE WEB • AUTOSPORT.COM

What you think of the motorsport news of the past week



Red Bull can still livery it large

Whoever works at the marketing and creative department at Red Bull is a genius.

This team always knows how to stand out from the crowd, but its latest trick, the camouflage livery, is phenomenal. Apart from covering what needs to be covered, it's a

perfect comeback to all those disappointed comments regarding the dull, colourless cars.

Red Bull is still like a cheeky boy mocking others – I can even imagine they decided to come up with this livery a few days ago.

Brigitta Gyimesi, by email

There is much justifiable complaint from the lesser Formula 1 teams about the cost of their power units and I would like to raise an argument in support of them.

Surely the aim of the engine manufacturer is to use the knowledge gained on track in their road cars and thus get their costs back from a much wider customer base. Is it not the case that this is precisely why we now have to refer to the power unit rather than just the engine even in our fancy road cars?

By running a manufacturer's power unit in the back of their cars, the lesser teams provide the test bed for the units, which helps the manufacturer to perfect

the technology for use in their road cars. There is no future payback to these test-bed users when the results of these developments come to fruition on the roads of the world.

After watching F1 for over 40 years the one common thing that turns me off is the constant quibble about the way revenues tumble down. How can lesser teams ever improve when they come and go at such regular intervals through a lack of funding? A more sensible approach is needed and I agree with Jonathan Noble that this area needs looking at and the cost should be sensibly capped.

As an aside, Bernie Ecclestone's attitude towards the financing of the

lower teams gets right up my nose, as it does with all my friends who follow F1.
Paul JH Caldwell
Widnes, Cheshire

My initial reaction to pictures of Nissan's new front-engined LMP1 car was to wonder what the company's design team put in their brownies.

Then, on reflection, I realised this is a pretty smart move. The WEC is already proving to be an excellent showcase for green tech, and a damn fine racing series to boot. I really hope Nissan's brave, stand-out-from-the-crowd approach pays off.

Frances Stewart
London SE13

BIG NUMBER

29 Number of GT3 cars on the best-quality entry list ever received for the Bathurst 12 Hours. The total number of cars attracted is 54.

MILESTONE

5 Nelson Piquet has decided to keep son Pedro in Brazilian F3 this year for the sake of his education. Another title would mean the Piquet family have won five in F3!



WHAT'S ON TRACK



Bathurst 12 Hours
has quality field

BATHURST 12 HOURS

Mount Panorama, New South Wales, Australia
February 8
bathurst12hour.com

TOYOTA RACING SERIES

Rd 4/5
Taupo, New Zealand
February 7-8
toyota.co.nz

EUROPEAN RALLY CHAMPIONSHIP

Rd 2/10
Rally Liepaja, Liepaja, Latvia
February 6-8
fiaerc.com

ANDROS TROPHY

Super Finale
St Die des Vosges, France
February 7
tropheeandros.com



The ERC heads
to Latvia

BRAZILIAN F3

Rd 1/8
Curitiba, Brazil
February 7-8
formula3brasil.com.br

MY FAVOURITE DRIVER

Peter Brock

He wasn't just a nine-time Bathurst 1000 winner and touring car legend. As a human being he had rare qualities, says **MARCUS SIMMONS**

I guess I stopped having favourite drivers during my teens – my motivation became great racing, and it didn't matter who won or lost. But if we're talking about a man who, for his human qualities as well as his driving, has made the biggest impression on me, that has to be Peter Brock, who I got to interview at the 1997 Bathurst 1000.

Brock had been on my radar since I was a lad watching much-delayed Bathurst coverage on BBC *Grandstand*, and by the time I arrived at Mount Panorama he'd long since announced that this was his final season as a professional driver. So it seemed natural to get an interview with him some time during my five days at 'The Great Race'.



Brock in 1993
Bathurst

He was driving a Vauxhall Vectra – rebranded a Holden, naturally – for Triple Eight alongside Derek Warwick (John Cleland, a mate of Brock's, was in the sister car and furious about it!). I'd got pretty friendly over the season with the team – its debut year was also my first full season covering the BTCC for AUTOSPORT – so getting my audience with the great man sorted wasn't a problem. But what would 'Brocky' be like?

First of all he was hugely welcoming, and seemed as impressed that an AUTOSPORT bloke wanted to interview him as I was that a legend was freely giving his time to me during a hectic week. With one hand almost permanently on the handle of his mug of herbal tea (replenished numerous times over our chat), he started off on familiar racing territory, but then things took an interesting turn.

He began talking about helping the lads in the Holden Young Lions junior team, guiding the many young people he met as an ambassador of Holden – and indeed motorsport in general – and using that to project a good image for the sport to the public and make a positive difference for everyone. "It



Brock walks away
from Goodwood
for the last time

HAWKINS/LAT

"His dignity, compassion and charisma made a huge impression"

seems like the education systems these days teach people how to earn a living rather than how to live their lives," he told me.

"I use my reputation I've gained in motorsport to give me access to talk to people about issues that aren't necessarily just driving. They're more to do with attitudes to driving and to life. Motorsport is a fantastic educator, a

massively complex university."

And so he continued. Here I was receiving wisdom from a guru of motorsport-tinged philosophy. I was lapping it up, and that encouraged him more. His dignity, compassion and charisma made a huge impression.

One of my favourite screen-saver photos in the office is of Brock walking past the bales of hay after retiring from a race at the Goodwood Revival, just five days before his death. Whenever I see that image, I always think of a charming man who gave me my best interview ever.

FROM THE SOFA

WHAT'S ON TELEVISION



Fans relish the opening day of winter testing

TEEL/LAT

How TV should exploit F1 testing

WHEN IS THE ABSOLUTE PEAK

of fan interest in Formula 1? The start of the season opener? A title-deciding grand prix? It's arguably neither. For the diehard fans most likely to interact with F1 teams and sponsors, or commit to pay-per-view F1 broadcasting, it's surely the morning of day one of the first test of the season. The fervency of social media and the rush of traffic to autosport.com's live coverage is ample evidence of the hunger for every possible snippet of information in those hours.

Does that make it a spectacle worth televising? On paper, and on the evidence of every attempt at televised testing so far, no. But that doesn't mean it's not worth another attempt by one of the F1 broadcasters (either televised or streamed) or even by Formula One Management itself.

Sky Sports F1 dipped its toe in the live-testing water with afternoon broadcasts (in 3D!) from the final test in 2013, and was unlucky to end up with a lot of empty, wet-track footage. But it's not the last test that really captures the imagination, it's the early bits of the first.

That there may be little track action to watch, and that any lap times produced may be of zero significance, doesn't really matter. The F1 audience has been deprived for over two months. Going without something you love for that long

leaves people rampantly hungry for it. It's simply enough to be celebrating that F1 is back and to get a few tantalising hints of its new-season themes and flavours. It's F1 2015's first-teaser trailer.

There was certainly demand for a few hours of minimal frills, presented-from-the-pitlane coverage capturing Sebastian Vettel starting work at Ferrari, Fernando Alonso stepping back into a McLaren and Red Bull stunning the paddock with its dazzle camouflage. There were enough F1 folk milling around the pitwall and paddock to be grabbed for soundbites too. No doubt there are slickly produced season-preview programmes to

"Day one of testing is F1 2015's first-teaser trailer"



Early tests at Jerez should be on TV

JUSTINE BETTY

come, but they won't capture F1 fans' passion in quite the same way as transmitting the raw anticipation of that first morning at Jerez. For the rest of the winter, the round-ups going out on Sky Sports F1 and FOM's F1 app are perfectly adequate, but day one felt like an opportunity missed.

Credit to the F1 teams, though, for doing ever more to stoke and tend to fans' pre-season interest via social-media streams and self-produced video content (around FOM limitations), ensuring that on Sunday morning fans could watch their bulging Twitter feeds in the absence of TV. McLaren's *Back to the Future* spoof with Jensen Button and Fernando Alonso was – like Mercedes' 'spy videos' of its shakedown – mocked as cheesy by many. But in a sport so often criticised for ostracising fans or talking itself too seriously, for austere/alooof/clinical (by reputation) McLaren to show a playful side cannot be a bad thing.

Even if the F1 hierarchy is disinterested in promoting itself properly and team chiefs can't agree on the oft-mooted properly coordinated joint launch event (an idea that has huge potential), at least teams' digital media arms are in tune with when fan fever is most in need of satiating.

Matt Beer

TV pick of

Edited by Matt Beer



ERC RALLY LIEPAJA

Eurosport

Saturday 2300-2330/

Sunday 2230-2300

The quiet weekend ahead is pretty much the 2015 motorsport season's last lull before non-stop major events until the end of November. This week the European Rally Championship's Latvian round is the only international action. Though the ERC lacks strength in depth, Eurosport does a great job of bringing it to life, so expect some gorgeous camerawork in the snow. After an early crash in Austria last month, the pressure is on Craig Breen to relaunch his title bid.



V8 SUPERCARS 2015 LAUNCH

Motors TV

Saturday 2200-0505

With Nissan, Volvo and Mercedes coming in to challenge arch-rivals Holden and Ford in Australia's door-banging, kerb-hopping, fire-breathing V8 series, the global profile of Australia's premier championship is growing. If you're *really* keen, you can stay up all night on Saturday to watch seven hours of live coverage from the official pre-season test. For the merely curious, there are shorter recaps of the test and its 'shootout' showpiece at 1650 and 1855 on Sunday.

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GLENN FREEMAN
 EDITOR **AUTOSPORT.COM**

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BY THE TIME THIS MAGAZINE comes out our team of reporters will be on their way back from the first Formula 1 test of the year at Jerez. Testing is always incredibly hard to read – particularly the first one of the year, and particularly at a circuit that the teams tell us every year is “not representative”. If you’re wondering why they bother going there each year, you’re on the same wavelength as us.

That won’t put our experts off

though, as if you look close enough there are always clues to be taken about how 2015 is shaping up, and if you ask the right people the right questions you can dig beyond the raw data. We’ll be analysing the week’s events extensively on autosport.com, starting with a ‘things-we-learned’ summary from the journalists we sent to Spain. Then we’ll get the thoughts of ex-F1 designer Gary Anderson and our magazine editor Edd Straw on what they made of test one.

HOT ON THE WEB THIS WEEK

KIMI RAIKKONEN LOOKS AHEAD TO THE NEW F1 SEASON



SEARCH FOR: SF15-T - Interview with Kimi Raikkonen

The Ferrari star delivers his initial impressions of the team’s new SF15-T, and talks about his hopes for the upcoming season and what it’ll be like having Sebastian Vettel as a team-mate – in the way only Kimi can. Look out for the moment he cracks a smile.

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85

the week



F1'S DAY OF TYRE DRAMA

Sky Sports F1
Sunday 2200-2300

Sky Sports F1 is working its way through 2013 Formula 1 season highlights at the moment, and is about to reach the point where Sebastian Vettel started winning race after race. But before then, it's worth reliving that year's game-changer: the incredible British Grand Prix, when a string of tyre blowouts produced high drama and left Pirelli under the microscope. Not the sport's greatest day, but a significant one for the modern era.



MONTE CARLO WRC HIGHLIGHTS

Motors TV
Thursday 1310-1415 (+repeats)

It was hard to appreciate just how much the World Rally Championship had missed Sebastien Loeb before his return for Monte Carlo reignited his rivalry with Sebastien Ogier and reminded the world how absorbing the WRC can be when two absolute legends are grappling over every second on iconic stages amid unpredictable ice and snow. Keep the hour-long highlights recap on Motors for posterity in case it really is Loeb's final, final WRC farewell.



LEGENDS OF F1: JUAN PABLO MONTOYA

Sky Sports F1
Sunday 1900-2000

You can stumble across a randomly generated *Legends/Architects of F1* pretty much any time on Sky Sports F1 during the off-season, and that means the Steve Rider-presented gems among them can easily get overlooked amid so much repetition. The Juan Pablo Montoya edition certainly bears another look both as a reminder of how spintingling his four years with Williams were – including the 2003 title fight – and for his candour over walking out on McLaren to join NASCAR mid-season in 2006.



GP2 2014: AUSTRIA SPRINT-RACE RECAP

Sky Sports F1
Wednesday 2045-2200

Last season's GP2 races are also proving ripe for a winter reshoving as Sky Sports F1 keeps its schedule ticking over, and there were some crackers among them. The Red Bull Ring sprint race stands out – if you're yet to be convinced by Johnny Cecotto Jr, check out the Trident racer withstanding a series of attacks from Caterham's Alexander Rossi and Racing Engineering pair Raffaele Marciello and Stefano Coletti in one of the year's better Sunday-morning races.

Formula 1 minnows

Which were the most popular triers and battlers (mostly) at the back of the field? By **EDD STRAW**

Defining the criteria that qualify a team for minnow status is not easy. Yet we all recognise and love a true underdog when we see one.

Watching small teams, and in earlier days genuine private owners, punch above their weight has always been one of the joys of grand prix racing, and the 10 selected here all

showed the tenacity needed to get genuine results. For the purposes of this list, any team winning a world championship race is not eligible as that elevates it to a higher echelon.

The 10 entrants selected here vary in size and era, but they all have one thing in common: they were far more than the mere sum of their parts and their financial clout.



1 Minardi (1985-2005)
Starts 340 Best finish 4th Points 38
Best season 7th (1991)

Pierluigi Martini briefly leading the 1989 Portuguese GP was one of the most popular moments in F1 history. Giancarlo Minardi's plucky Italian squad punched above its weight for 21 years before becoming Scuderia Toro Rosso.

2 March/Leyton House (1987-1992)
Starts 103 Best finish 2nd Points 38
Best season 6th (1988)

The revived March team performed sensationally with young technical director Adrian Newey. Ivan Capelli's near-win in France in 1990 is the highlight, but there were other podiums before the funding dried up.

3 John Love (1962-1972)
Starts 9 Best finish 2nd Points 6
Best season 11th (drivers' championship 1967)

The Rhodesian regularly took part in the world championship race at Kyalami as a privateer. Sensationally, in '67, he led in his own Cooper and only lost victory to Pedro Rodriguez after a late stop with a fuel-pump problem.

4 Gordini (1952-1956)
Starts 33 Best finish 3rd Points N/A
Best season 4th in drivers' standings (1956)

Amedee Gordini's plucky French squad reached for the stars in the 1950s, but usually failed to deliver. Finances were tight, but there were occasional podiums for a team that could not hope to compete with the big guns.

5 Onyx (1989-1990)
Starts 17 Best finish 3rd Points 6
Best season 10th (1989)

Mike Earle's squad showed its potential with a remarkable debut season in 1989, finishing third with Stefan Johansson at Estoril. The team was acquired by Swiss Peter Monteverdi and closed after two years.

6 Super Aguri (2006-2008)
Starts 39 Best finish 7th Points 4
Best season 9th (2007)

Created by Honda to allow Takuma Sato to continue in F1, the team struggled in its first year. But famously, Sato passed Fernando Alonso's McLaren in Canada in 2007 prior to the team's demise a year later.

7 Osella (1980-1990)
Starts 132 Best finish 4th Points 5
Best season 12th (1982 & 1984)

Any team that has the courage to designate an F1 car 'FA11' gets my vote. Only scored points on two occasions, becoming a fan favourite with its often-chunky cars. Changed its identity to Fondmetal from 1991.

8 Virgin/Marussia (2010-2014)
Starts 93 Best finish 9th Points 2
Best season 9th (2014)

Embarrassingly, the team started life with a fuel tank too small to last a GP distance at full pace, but the race team became an increasingly effective unit over the years. Jules Bianchi's ninth in Monaco last year was a highlight.

9 Ensign (1973-1982)
Starts 99 Best finish 4th Points 19
Best season 10th (1977)

Mo Nunn's team produced some lookers during its 10 seasons in F1, and ran a few greats including Nelson Piquet, Clay Regazzoni and Jacky Ickx. But it was always fighting for funds and merged with Theodore in '83.

10 Scuderia Italia (1988-1993)
Starts 92 Best finish 3rd Points 15
Best season 8th (1989 & 1991)

The Italian squad ran Dallara and Lola machinery in F1. It was the last team to claim a podium finish in a race it had to pre-qualify for, courtesy of JJ Lehto's third at Imola '91, but dropped out of F1 after a pointless '93 campaign.

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