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F1 2020

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P16

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Is Red Bull now Mercedes' closest F1 challenger?

As we showed last week, Mercedes emphatically 'won' the first three days of pre-season Formula 1 testing. The second test was rather less clear-cut, though a competitive order did start to emerge.

Mercedes is still ahead but, as Alex Kalinauckas shows in our analysis on page 18, Red Bull has been quietly going about its business and seems to have good underlying pace.

More tricky is Ferrari. Is it really in as much trouble as it looks? Has the 'settlement' with the FIA (p4) taken the edge off of its performance or are those two things unrelated? There's a case to be made that Ferrari is trying to avoid the high expectations – quickly dashed when the cars arrived in Melbourne for the season opener – it had after testing last year. But it does appear that it currently has some ground to make up and Mercedes is on top.

How many races we actually end up with in F1 2020 is more open to question. The Chinese Grand Prix has already been postponed and, with coronavirus still spreading and many events being cancelled, it seems likely that more races will be affected.

Motorsport is hardly the most important reason to fly people around the world and minimising the risk and suffering should clearly be a priority, so it's entirely possible that this year's world championship won't reach the record-breaking 22 grands prix originally planned.

MotoGP (which we preview anyway on p34) has already lost its first round, which was due to take place in Qatar this weekend, and the Thai GP has also been postponed. More could follow.

One event that did go ahead was last weekend's Formula E race in Morocco (p40), where Techeetah finally made good on its previous pace. Mercedes is currently fifth in the electric championship...



Kevin Turner
Editor
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NEXT WEEK 12 MARCH

F1 season preview: all you need to know about the contest ahead



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Motorsport Images/Tee

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FIA CAN'T CONFIRM 2019 FERRARI WAS LEGAL



FORMULA 1

Mystery continues to linger in the Formula 1 paddock after the FIA announced last week that it had reached a "settlement" with Ferrari following an analysis of its 2019 engine.

Powerplant performance across the four manufacturers had appeared to converge in recent years thanks to the maturity of the engine regulations, only for Ferrari to make a step forward in 2019 and display an impressive straightline speed. The team spent much of the season facing allegations that it was circumventing fuel-flow and oil-burn regulations to give its engine more power, resulting in multiple clampdowns by the FIA through the issuing of technical directives.

Ferrari always stressed that its engine remained legal, only for the matter to come to a head at the season-ending Abu Dhabi Grand Prix, when the team was found to have wrongly declared the fuel load in Charles Leclerc's car. The team was fined €50,000 for the breach and the case only added to its rivals' suspicions, although a formal protest was never lodged by any other team.

But the saga took another twist on the final day of pre-season testing at Barcelona last week when the FIA issued a statement announcing that it had concluded its investigation into Ferrari's engine and, more curiously, reached a private agreement with the team.

"The FIA announces that, after thorough technical investigations, it has concluded its analysis of the operation of the Scuderia Ferrari Formula 1 Power Unit and reached a settlement with the team," the statement read. "The specifics of the agreement will remain between the parties. The FIA and Scuderia Ferrari have agreed to a number of technical commitments that will improve the monitoring of all Formula 1 Power Units for forthcoming championship seasons as well as assist the FIA in other regulatory duties in Formula 1 and in its research activities on carbon emissions and sustainable fuels."

While the statement gave closure to the matter, at no point did it confirm whether Ferrari's engine had been legal and within the regulations through 2019, merely that the investigation was over.

The final sentence's detailing of the commitment for the FIA and Ferrari to collaborate on power-unit monitoring perhaps hints at a 'plea deal'-style agreement being struck between the two parties to avoid taking the matter further. Or it could be seen as an acceptance by the FIA that it could not definitively prove that Ferrari had broken the regulations.

Another notable aspect of the statement was its timing, issued with just 10 minutes left on the clock of the final day of pre-season testing. This meant officials from both the FIA and F1 had already left the Circuit de Barcelona-Catalunya, while all media briefings had already taken place on the day — including one for Ferrari team principal Mattia Binotto.

As a result, there was no opportunity for any public reaction or comment, which will now be on hold until team members appear for their media commitments ahead of next week's Australian Grand Prix.

At least one of Ferrari's rivals is understood to have been surprised by the statement, having received no communication from the FIA that it would be issued.

Ferrari's rivals were unhappy with the handling of the issue last year, even if they kept their criticism largely out of the public domain. Red Bull driver Max



Leclerc's Abu Dhabi GP fuel-load snafu did little to stop suspicions from rival teams

Verstappen was the most vocal figure on the matter, telling Dutch TV after the United States Grand Prix that it was "not strange" that Ferrari's performance had dipped in the wake of a technical directive from the FIA.

Binotto condemned the comments at the time, calling them "completely wrong", and later said that Ferrari had proved its legality after being "the most checked" team through last season. A second fuel-flow meter has been introduced for 2020 in a further measure by the FIA to stop teams getting around the regulations.

Prior to the FIA's statement on the final day, Ferrari's straightline speed had been a talking point throughout testing as the team appeared to be slower than many of its rivals. Mercedes claimed that Ferrari had been running far below the performance of its customer teams, suggesting there was more time to gain in the second week. Ferrari ended testing more than 0.6 seconds off the fastest time set by Mercedes' Valtteri Bottas in the opening week.

Binotto said that Mercedes' assessment was "not correct", instead saying Ferrari's drop in straightline speed had been due to a change in its design philosophy. "We believe that we are not the fastest car at the moment, so I think on lap time we will be behind at the start of the season," he said. "What are we lacking? The car of this season compared to the one of last season is overall faster, but we are faster in the corners, slower on the straights."

Sebastian Vettel echoed Binotto's thoughts, saying he found the car to be "too draggy" through testing.

LUKE SMITH

P27 TIM WRIGHT'S VIEW



Zandvoort banking work continues for Dutch GP

FORMULA 1

The first images of Zandvoort's completed banked turns have been revealed ahead of the return of the Dutch Grand Prix on 3 May.

An extensive upgrade project has taken place at Zandvoort — which has been off the Formula 1 calendar since 1985 — including the modification of two corners to create banking. The final turn is now at an 18-degree angle, making it twice as steep as the banking at Indianapolis, which hosted the United States Grand Prix between 2000-07. Hugenholtzbocht, the third corner (below), features banking of 19 degrees.

The first images of the completed banking construction project were released last Thursday. The completion of the banked sections comes following work by Italian track design company Dromo Circuit Design and Geobrugg, which installed the FIA-homologated debris fences.

"We did something that we thought would be really formidable to drive, that has no equal at any other race tracks," said Dromo founder Jarno Zaffelli. "Turn 14 is quite ample and wide, making it full throttle, whereas the transition between Turn 2 and Turn 3 has a lot of elevation and banking changes. All of your horizon is tilting, all of your perception is evolving, you feel like you are being squeezed. It's like being in a corkscrew, depending on the line that you are following."

The asphalt laid on the banking is a bespoke mix designed to be laid at an angle that should result in fewer marbles coming off the tyres, allowing various lines to be taken through the corner.

Red Bull F1 driver and home favourite Max Verstappen hopes the banked final corner will create more overtaking opportunities by allowing earlier deployment of DRS. "The final corner was flat-out even without the banking, but I do hope the banking enables us to open the DRS a bit earlier," said Verstappen. "And the rest of the track remains pretty much the same, so it's still as it used to be. Those parts were very nice to drive already."

LUKE SMITH





MotoGP season openers are latest coronavirus victims

CORONAVIRUS

The MotoGP season-opening Qatar and Thai grands prix were the highest-profile motorsport victims of the coronavirus epidemic as Autosport closed for press this week.

With the number of worldwide coronavirus cases exceeding 80,000, more countries are clamping down on travel to and from infection hotspots. Northern Italy's increase in confirmed cases has led to Qatar imposing an immediate 14-day quarantine for all travellers from Italy. With a large proportion of the paddock hailing from Italy, MotoGP's hand was forced. Plans had been put in place just days earlier to help those affected get across the Qatari border, but last weekend a sharp rise in confirmed coronavirus cases in Italy to 1700 led to the Qatari government cancelling the race.

With the Moto2 and Moto3 teams (above) already at Qatar's Losail circuit for a pre-season test, they will remain in the country and stage their opening round as planned this weekend.

Hours after the Qatar GP was scrapped, the Thai government confirmed the postponement of its race, scheduled for later this month at Buriram. A countrywide ban on large gatherings, as opposed to travel restrictions, was the reason according to Dorna Sports CEO Carmelo Ezpeleta who, in a statement issued on Monday, insisted "there will absolutely be a 2020 MotoGP world championship" and hoped that all races could be run.

The Thai GP is set to be pushed back to September, with the MotoGP season now due to start on 5 April at Circuit of The Americas, although this is yet to be confirmed owing to the ever-changing travel situation.

The 'bike-race cancellations are the latest in motorsport's coronavirus saga that began with the cancellation of this month's Sanya Formula E round in China, and continued with the postponement of the Formula 1 Chinese Grand Prix. Now the season-opening Australian, Bahrain and Vietnamese GPs are all reportedly under threat.

Australian GP chief Andrew Westcott said on Monday: "At this stage there is no indication of further travel bans, nor is there any indication that Formula 1 and the teams will not be arriving as usual. Formula 1 has again confirmed overnight that the Australian Grand Prix is going ahead."

Vietnam shares a land border with China, while some teams and drivers faced significant hold-ups in entering Bahrain for this week's Formula 2 and Formula 3 pre-season test sessions.

In Japan, Super Formula's opening round at Suzuka on 5 April, the series' test at the same venue on 9-10 March, and the Super Taikyu opener (also at Suzuka) on 22 March are all cancelled.

The DTM has moved its 16-18 March test at Monza to Hockenheim on 16-19 March, and Monza's GT World Challenge Europe and Formula Renault Eurocup opener on 19 April is under threat. This week's Barcelona test for International GT Open and Euroformula Open has been cancelled.

LEWIS DUNCAN AND AUTOSPORT STAFF

P34 MOTOGP PREVIEW

Alonso at Indy with McLaren

INDIANAPOLIS 500

Fernando Alonso will reunite with McLaren for his third attempt at the Indianapolis 500 this May, and has hinted that he may drive the Chevrolet-engined #66 Arrow McLaren SP car at other races.

The two-time Formula 1 world champion had seemed set to drive a sixth car for the Honda-powered Andretti Autosport squad but the deal fell through, which some believe is due to Honda's lingering resentment over his public criticism of its early attempts at F1 hybrid engines. But Autosport sources suggest a bigger hang-up is Alonso's now well-established association with Honda's arch rival Toyota in the World Endurance Championship and Dakar Rally.

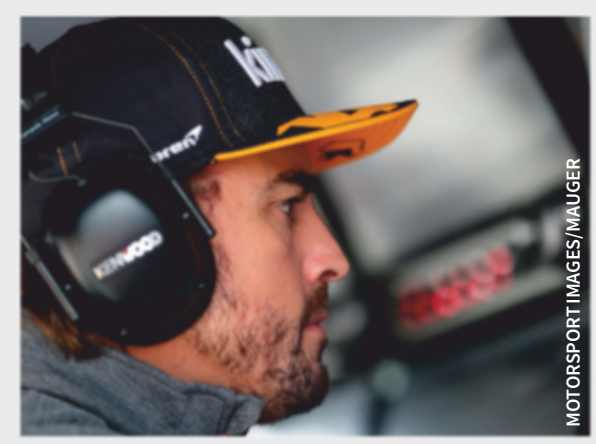
The result is that Alonso, whose ambassadorial role for McLaren ended at the start of this year, became available to the team co-owned by Sam Schmidt and Ric Peterson and now in partnership with McLaren. His race engineer will be Craig Hampson, the team's star R&D engineer who moved to McLaren SP from Dale Coyne Racing last December.

Alonso revealed that during earlier negotiations with Andretti — for which he raced at Indy in 2017 — and with Arrow McLaren SP, the question of participating in additional races has been a factor.

"That was part of the conversations I had with both teams and it's still an open point to develop," said Alonso. "Someone thinks that later in the year it can be a possibility to experience a normal IndyCar race, just to see how it feels and add some more experience.

"I have the thought that maybe that would be before the Indy 500 because it gives me a little bit of preparation... even if it's not an oval race. There are things under negotiations and something that took a role in the final decision."

DAVID MALSHER-LOPEZ


MOTORSPORT IMAGES/MAUGER



ENVISION VIRGIN RACING

Cassidy sets all-time Formula E record on debut

FORMULA E

Reigning Super Formula champion Nick Cassidy posted the quickest lap in Formula E history during the post-Marrakech E-Prix rookie test last Sunday.

A 1m16.467s run was comfortably faster than the previous best recorded on the Circuit Moulay el Hassan — a 1m17.074s set by Nico Muller in the 2018 test. It was also 0.7s quicker than the previous day's pole effort from eventual race victor Antonio Felix da Costa. Standing proud, though, was Cassidy's average speed. Nothing to date in the series can live with his 86.9mph flier.

Cassidy's effort was outstanding, but it takes nothing away from the full-time FE drivers. The test took place in warmer conditions than qualifying, and there was much more rubber laid on the track.

What's more, around the calendar disruption caused by the COVID-19 coronavirus, Cassidy (above) is set for campaigns in Super Formula — having re-signed with TOM'S for 2020 just before the test — and Super GT this season. That means that, realistically, he's unlikely to join the FE grid in the immediate future.

Second fastest was Sergio Sette Camara, 0.5s slower than Cassidy. To show that speed for the Dragon squad, which sits 11th from 12 in the teams' standings, bodes well should he want to make an FE switch.

Third and fourth fastest were DS Techeetah runners Filipe Albuquerque, 34, and last-minute stand-in Nicolas Lapierre, 35 (see report, p40). Neither is a conventional 'rookie', but the team called up two technically minded drivers to give immediate feedback and target a qualifying-specific programme — so far its weakest area.

Daniel Cao, driving for perennial backmarker NIO 333, was 23rd fastest out of the 24 cars. But due to travel restrictions imposed by coronavirus he was unable to prepare in the team's Oxford simulator. The Asian F3 racer still beat regular driver Ma Qinghua's qualifying lap by 0.1s and has done his FE future no harm at all.

MATT KEW

TOP 10 TIMES

POS	DRIVER (TEAM)	TIME
1	**Nick Cassidy** (Virgin Audi)	1m16.467s
2	**Sergio Sette Camara** (Dragon)	1m16.930s
3	**Filipe Albuquerque** (DS Techeetah)	1m17.092s
4	**Nicolas Lapierre** (DS Techeetah)	1m17.116s
5	**Kyle Kirkwood** (BMW)	1m17.272s
6	**Norman Nato** (Venturi Mercedes)	1m17.302s
7	**Jake Hughes** (Mercedes)	1m17.303s
8	**Lucas Auer** (BMW)	1m17.327s
9	**Kelvin van der Linde** (Audi)	1m17.360s
10	**Sacha Fenestraz** (Jaguar)	1m17.490s



Lucas Auer had debut FE test with BMW – his 2020 DTM employer

BMW



Surprises on Le Mans entry as LMP1 equals its record low

LE MANS 24 HOURS

Just six LMP1 cars were on the 62-car entry list for this year's Le Mans 24 Hours when it was published last week. That's a record low, equalling the 2017 figure.

The P1 field for the World Endurance Championship finale on 13-14 June will be made up of the two Toyota TS050 HYBRIDs, the expanded squad of Rebellion-Gibson R-13s (the second entry returning to the series at Spa in April) and the pair of Ginettas-AER G60-LT-P1s. The ByKolles team has only been given second spot on the reserve list with its ENSO CLM-Gibson P1/01 (above) for which it filed entries at Spa and Le Mans.

That compares with the three Toyotas, two Porsche 919 Hybrids and the ByKolles that lined up three years ago after the withdrawal of Audi and Rebellion Racing's one-season move to the LMP2 ranks.

A place on the reserve list for ByKolles is arguably not a surprise even if the German team is telling us it will be on the WEC grid next year with a new car built to the LM Hypercar prototype rules. Race organiser the Automobile Club de l'Ouest looks favourably at cars contesting a full series run to its rules, and ByKolles has been absent from the WEC so far in 2019-20.

That makes it a surprise that the Franco-American DragonSpeed squad has landed only a single firm spot in LMP2 and sixth place on the reserve list. Its European Le Mans Series entry has made the cut in the 24-car LMP2 field, but the ORECA-Gibson 07 it is racing in the IMSA SportsCar Championship hasn't. This is the car due to be raced by Felix Rosenqvist, Ben Hanley and Henrik Hedman.

DragonSpeed boss Elton Julian said: "I'm more than disappointed. P6 on the reserve list is an entirely different level of no to just missing out and maybe being first or second reserve. It was a surprise given the support Henrik [one of DragonSpeed's primary backers] has given the ACO."

Newcomers in LMP2 include the British Carlin and Nielsen Racing teams. Carlin has competed in the ELMS since last year and also finished runner-up in the 2019-20 Asian Le Mans Series with its Dallara-Gibson P217, while Nielsen has gained its entry for winning the LMP3 class in the ALMS.

The GTE Pro field has fallen to 11 cars from last year's high of 17 with the disappearance of Ford and BMW from the WEC. Corvette Racing, back at Le Mans for its 21st consecutive participation, and Risi Competizione bolster the six regular WEC cars along with a pair of additional Porsches run by the CORE Autosport IMSA team. Le Mans stalwarts Sebastien Bourdais and Olivier Pla are the two drivers listed in Risi's Ferrari 488 GTE.

A total of 75 entries was received for Le Mans, the grid for which was expanded to 62 after the initial list was published last year, with two extra pits built.

GARY WATKINS

LMP1

NO	TEAM	CAR
1	**Rebellion Racing**	Rebellion-Gibson R-13
3	**Rebellion Racing**	Rebellion-Gibson R-13
5	**Team LNT**	Ginetta-AER G60-LT-P1
6	**Team LNT**	Ginetta-AER G60-LT-P1
7	**Toyota Gazoo Racing**	Toyota TS050 HYBRID
8	**Toyota Gazoo Racing**	Toyota TS050 HYBRID

LMP2

11	**EuroInternational**	Ligier-Gibson JSP217
21	**DragonSpeed USA**	ORECA-Gibson 07
22	**United Autosports**	ORECA-Gibson 07
24	**Nielsen Racing**	ORECA-Gibson 07
25	**Algarve Pro Racing**	ORECA-Gibson 07
26	**G-Drive Racing**	Aurus-Gibson 01
28	**IDEC Sport**	ORECA-Gibson 07
29	**Racing Team Nederland**	ORECA-Gibson 07
30	**Duqueine Team**	ORECA-Gibson 07
31	**Panis Racing**	ORECA-Gibson 07
32	**United Autosports**	ORECA-Gibson 07
33	**High Class Racing**	ORECA-Gibson 07
34	**Inter Europol Competition**	Ligier-Gibson JSP217
35	**Eurasia Motorsport**	Ligier-Gibson JSP217
36	**Signatech Alpine Elf**	Alpine-Gibson A470
37	**Jackie Chan DC Racing**	ORECA-Gibson 07
38	**Jota**	ORECA-Gibson 07
39	**SO24-HAS by Graff**	ORECA-Gibson 07
42	**Cool Racing**	ORECA-Gibson 07
45	**Thunderhead Carlin Racing**	Dallara-Gibson P217
47	**Cetilar Racing**	Dallara-Gibson P217
48	**Performance Tech**	ORECA-Gibson 07
49	**Rick Ware Racing**	Riley-Gibson Mk30
50	**Richard Mille Racing Team**	ORECA-Gibson 07

GTE Pro

51	**AF Corse**	Ferrari 488 GTE Evo
63	**Corvette Racing**	Chevrolet Corvette C8.R
64	**Corvette Racing**	Chevrolet Corvette C8.R
71	**AF Corse**	Ferrari 488 GTE Evo
82	**Risi Competizione**	Ferrari 488 GTE Evo
91	**Porsche GT Team**	Porsche 911 RSR
92	**Porsche GT Team**	Porsche 911 RSR
93	**Porsche GT Team**	Porsche 911 RSR
94	**Porsche GT Team**	Porsche 911 RSR
95	**Aston Martin Racing**	Aston Martin Vantage
97	**Aston Martin Racing**	Aston Martin Vantage

GTE Am

52	**AF Corse**	Ferrari 488 GTE Evo
54	**AF Corse**	Ferrari 488 GTE Evo
56	**Team Project 1**	Porsche 911 RSR
57	**Team Project 1**	Porsche 911 RSR
61	**Luzich Racing**	Ferrari 488 GTE Evo
62	**Red River Sport**	Ferrari 488 GTE Evo
65	**WeatherTech Racing**	Ferrari 488 GTE Evo
70	**MR Racing**	Ferrari 488 GTE Evo
74	**Kessel Racing**	Ferrari 488 GTE Evo
77	**Dempsey-Proton Racing**	Porsche 911 RSR
80	**Hub Auto Racing**	Ferrari 488 GTE Evo
81	**Gear Racing**	Ferrari 488 GTE Evo
83	**AF Corse**	Ferrari 488 GTE Evo
85	**Iron Lynx**	Ferrari 488 GTE Evo
86	**Gulf Racing**	Porsche 911 RSR
87	**JMW Motorsport**	Ferrari 488 GTE Evo
88	**Dempsey-Proton Racing**	Porsche 911 RSR
90	**TF Sport**	Aston Martin Vantage
98	**Aston Martin Racing**	Aston Martin Vantage
99	**Dempsey-Proton Racing**	Porsche 911 RSR

Innovative Car

84	**Association SRT41**	ORECA-Gibson 07

Macau winner Verschoor stays in FIA F3 with MP Motorsport

FORMULA 3



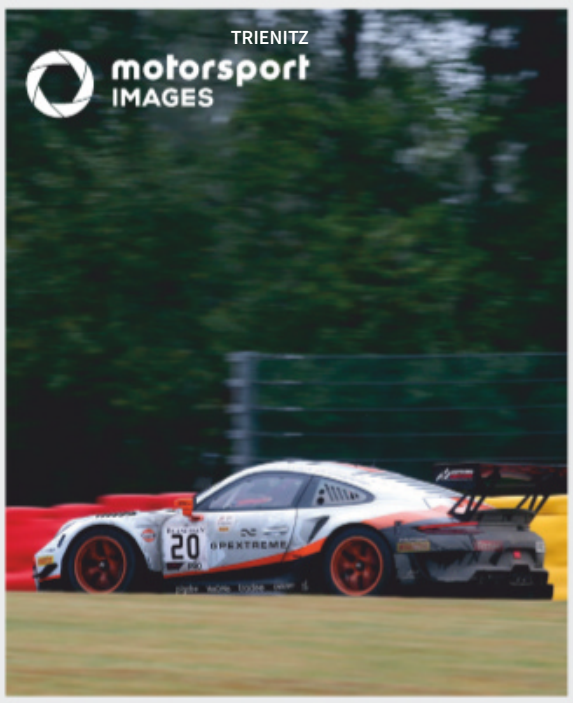
Surprise Macau Grand Prix winner Richard Verschoor is to stay in the FIA Formula 3 Championship for a second season with Dutch team MP Motorsport.

The underfinanced 19-year-old Utrecht racer last week became the final driver to be announced for this season's 30-car FIA F3 field. MP, the team with which he has raced for all but one season since he started his car-racing career in 2016, carried him to 13th in the F3 standings last season before the combination flummoxed the regular series frontrunners in Macau.

The announcement of Verschoor came hard on the heels of MP confirming 2019 Euroformula Open title contender Lukas Dunner alongside the already announced Bent Viscaal, and Campos Racing revealing that Sophia Florsch will complete its line-up. Florsch made her debut in FIA F3 machinery in Macau last November and will dovetail this with her European Le Mans Series and Le Mans 24 Hours campaigns.

MP's new UK arm, a revival of the old Manor Competition team that was a title winner in Formula Renault UK, is pressing ahead with plans to field up to three cars in Euroformula Open this season. Engineers Tony and Sarah Shaw, who ran Manor and have engineered at MP's Formula 2 team in recent seasons, are expected to choose HWA (formerly Mercedes) power for the series, which features the new Dallara 320 chassis.

MARCUS SIMMONS



GPX gets the Porsche big guns

GT WORLD CHALLENGE

Last year, GPX Racing won the Spa 24 Hours for Porsche on its debut in the pro class of what was then the Blancpain GT Series Endurance Cup. This year, the Dubai entrant will fly the flag for the German manufacturer in all five enduros on the calendar of what is now the GT World Challenge Europe.

GPX, which scored its shock victory at Spa last year with Kevin Estre, Michael Christensen and Richard Lietz, will field a pair of Porsche 911 GT3-Rs with factory backing, taking over the role filled by Rowe Racing in 2019. The roster of drivers will include five works contractees.

Two-time Le Mans 24 Hours winner Romain Dumas will drive alongside Porsche young professional Thomas Preining. They will share with Dennis Olsen, who won last year's Intercontinental GT Challenge with Porsche.

Patrick Pilet will drive the other car with Mathieu Jaminet and Matt Campbell, who have been given full factory contracts for 2020.

GPX will also contest the remainder of the IGTC with a single car, with a line-up that has yet to be announced.

GARY WATKINS

AUTOSPORT PLUS

Smart insight published daily



JEP

Corvette aiming for WEC partner team with C8.R

WORLD ENDURANCE CHAMPIONSHIP

Chevrolet on the grid full-time in the World Endurance Championship? It could happen. That's what the US manufacturer is working towards for the 2020-21 season.

A solo Chevrolet Corvette C8.R joined the GTE Pro field at Austin last month and will again be on the grid for the Sebring 1000 Miles later this month as the factory Corvette Racing team gears up for its first Le Mans 24 Hours with the new mid-engined racer in June. It is looking for a partner team for next season to ensure a full-time presence in the GTE Pro ranks.

"We want to do the WEC full time," said Corvette Racing programme manager Doug Fehan. "We've always wanted to do it, but up until this point we have never been able to make it work.

"We would need a partner team, because Corvette Racing is not set up to do it. We're not out their soliciting teams; it's more that we are waiting for people to come to us. There is interest out there and when someone is able to put together a proposal, we would appraise it and give it serious consideration."

The last customer Chevrolet WEC programme was mounted in the GTE Am class by the French Larbre Competition squad. It last competed in the series with a Corvette C7.R in 2016, and won the class title with that car's predecessor – the C6.R – in 2012.

GARY WATKINS

Hoggard heads to Asia for Carrera Cup attack

CARRERA CUP ASIA

Aston Martin Autosport BRDC Young Driver of the Year Award winner Johnathan Hoggard has secured a drive in the Asian Porsche Carrera Cup.

Hoggard, who was runner-up in last year's BRDC British Formula 3 Championship, will drive with Team StarChase, a leading squad in the series.

"I'm looking forward to the championship and working with Team StarChase," said Hoggard. "I am a newcomer and first I have a lot to learn, so that's where the focus is. I'm getting used to the Porsche and adjusting myself to the climate in Asia. It's just awesome to have this opportunity and I want to repay the confidence that the team has placed in me!"

While the series proper is scheduled to get under way at next month's Vietnamese Grand Prix, and also has a Singapore GP support fixture, Hoggard had his first taste of Porsche race action in last weekend's Porsche Sprint Challenge Asia round at Sepang. He finished second to Martin Ragginger in both races.

Autosport sources suggest that Hoggard is also closing on a parallel single-seater programme in Europe.

MARCUS SIMMONS



STARCHASE



Peroni from injury to test topper

FORMULA 2/3

Alex Peroni, survivor of a scary FIA Formula 3 shunt at Monza last September that ruled him out for the rest of the 2019 season, bounced back in style by emerging quickest from the series' first 2020 pre-season official test in Bahrain.

The long-haired Tasmanian, back at the wheel of a Campos Racing machine, lapped the Bahrain International Circuit quickest in what effectively ended up as a dummy qualifying session on the final afternoon of the three-day test. He edged out the HWA Racelab car of junior single-seater veteran Jake Hughes, who flew in after missing the first day while on Formula E rookie test duty in Marrakech, by 0.027 seconds.

Red Bull Junior Jack Doohan, in another HWA car, was third fastest – the Australian was the leading driver who can be counted as a rookie at this level.

Problems in the last session anchored Doohan's fellow Red Bull protege Liam Lawson (Hitech GP) at the foot of the times, but his Monday-topping effort left him fourth overall when proceedings finished on Tuesday.

The FIA Formula 2 field was also in action – minus ART Grand Prix's Christian Lundgaard, who was stranded at the Renault F1 juniors' training camp in Tenerife due to a coronavirus scare at their hotel. He was replaced by Sergey Sirotkin.

The F2 running hadn't finished as Autosport closed for press, with times likely to tumble as the final session headed into cooler evening conditions. Quickest over the opening days was Carlin's newly appointed Red Bull junior Jehan Daruvala, from Virtuosi Racing's Renault protege Guanyu Zhou and Pedro Piquet (Charouz).

MARCUS SIMMONS

TOP 10 F3 TIMES

POS	DRIVER (TEAM)	TIME
1	**Alex Peroni** (Campos)	1m46.173s
2	**Jake Hughes** (HWA)	1m46.200s
3	**Jack Doohan** (HWA)	1m46.324s
4	**Liam Lawson** (Hitech)	1m46.365s
5	**Logan Sargeant** (Prema)	1m46.522s
6	**Richard Verschoor** (MP)	1m46.590s
7	**Niko Kari** (Charouz)	1m46.606s
8	**Sebastian Fernandez** (ART)	1m46.686s
9	**Frederik Vesti** (Prema)	1m46.734s
10	**Alexander Smolyar** (ART)	1m46.744s

IN THE HEADLINES

NISSANY, SATO AT TRIDENT

Williams Formula 1 protege Roy Nissany and reigning Euroformula Open champion Marino Sato were confirmed as Trident's two drivers for this year's Formula 2 season just as Autosport was rolling through the printers last week – with its F2 grid summary that included the Israeli-Japanese duo on the grounds that everyone knew about it. That means the series' 22-car grid is complete.

PIGOT GETS INDY DEAL

Ed Carpenter Racing refugee Spencer Pigot has found a way back onto the IndyCar Series grid for 2020 – for two races anyway. Pigot will contest May's Indy GP road-course event and Indianapolis 500 with the new Citrone/Buhl Autosport team, in which ex-Indycar ace Robbie Buhl is a partner. The team is liaising with Rahal Letterman Lanigan Racing, which gave Pigot his initial IndyCar break back in 2016.

WEBBER MENTORS PIASTRI

Reigning Formula Renault Eurocup champion Oscar Piastri has joined the JAM Sports Management agency of ex-Formula 1 star Mark Webber. Australian Piastri, a Renault F1 junior, will drive with Prema Racing in this year's FIA Formula 3 Championship. "He's got that white line fever when he puts his helmet on and turns into a different character, which is sensational," said Webber.

FIA F3 CHANGES ITS FORMAT

The FIA F3 Championship has tweaked its points and reversed-grid formats for 2020 in light of the continuation of the 30-car field that proved such a success in 2019. It will now be the top 10 from race one that is reversed for the second-race line-up, up from eight. The points system for race two retains 15 points for the winner, but now gives points down to one for 10th position rather than one for eighth and is identical to the format used in the BTCC in the 1990s.

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Streaming big

The latest Drive to Survive *series from Netflix is creating a welcome buzz ahead of the 2020 F1 season, but will the new fans it creates keep watching?*

ALEX KALINAUCKAS

The pain in Lewis Hamilton's voice as he apologises to Mercedes for throwing away the lead of the 2019 German Grand Prix. The brutally casual way Christian Horner calls Pierre Gasly Red Bull's "Achilles' heel" last year. The nervous charm of Alex Albon showing camera crews around the small, rented home he shared with his family. There are plenty of highlights from the second season of Netflix's Formula 1 documentary, *Drive to Survive* — but what made all of them special was the level of access the show's producer, Box to Box Films, was allowed.

The new series seems to have been positively received by viewers and F1 fans. And it would seem — judging by the wording of waiver signs posted at various points of the recent Racing Point 2020 season launch in Mondsee last month — that filming for a third series is already under way.

Drive to Survive is undoubtedly good for F1. It's easily accessible to Netflix subscribers, it's bite-sized and fast-paced, and it pushes the championship's biggest characters firmly to the front. Nowhere else, surely, would you get Daniel Ricciardo saying (non-fans of gratuitous swearing, look away now): "Netflix are a real bunch of c****, aren't they? I'd love for them to play that!"

Such inclusions — as well as small details such as Hamilton and Toto Wolff forgetting Mercedes' full, sponsor-friendly, team name — give the show a bit of edge. The characters play up to their roles in a way they rarely seem to on traditional broadcasts. It feels noticeably less PR-satisfying than some of the other 'fly-on-the-wall-but-we-say-what-the-fly-sees' sports documentaries that have been churned out by streaming services in recent years, but the teams do naturally retain control over the ultimate inclusions.

> **"Tensions are rising regarding the level of access Netflix is granted for the price it pays"**

As the second season was released on the same day as the second 2020 pre-season test at Barcelona was concluding, there was plenty of interest in the paddock, and the drivers were regularly asked for their thoughts on the show. "I really enjoyed the first season," said Ferrari's Charles Leclerc. "I'm pretty sure for the image of Formula 1, for us drivers, it's very positive."

The drivers also revealed how the *Drive to Survive* team captures the moments that matter throughout the F1 season. "They're good at hiding, and getting things that you don't expect," said Kevin Magnussen, whose Haas team features in a dedicated episode that includes the dramatic confrontation (largely via audio only) between Magnussen, his team-mate Romain Grosjean and team boss Gunther Steiner after the intra-Haas collision at Silverstone last year. "I have seen the one that I'm in. And they didn't even put the bad things in…"

Valtteri Bottas, whose Mercedes team only agreed to let Netflix film it behind the scenes at Hockenheim (Ferrari only allowed filming at Austin) explained that the *Drive to Survive* team "knew when they had to step away and when they could be involved and so on. It didn't really change much for us, so that is well done."

"For us," said Williams deputy team principal Claire Williams, "having cameras around, it doesn't necessarily bother us because we understand the long-term impact of what those cameras are doing." Williams makes the key point — Netflix is trying to sell subscriptions to its platform, and F1 wants to increase interest in the championship. But there are other media players trying to do the same, and apparently paying a higher price for the privilege.

Taking an example from the UK, Sky Sports is the sole rights holder for live coverage of every F1 race, for which it is said to pay approximately £200million per season. In return, it can screen every session, broadcast from the paddock and interview the key figures. But as good as its feature segments are (and, when not overdoing the bonhomie, they are), they aren't a patch on the Netflix scenes.

Of course, one company is there to show a sporting event live, and the other can construct its offerings over many months before releasing at a set date. But it has already been suggested that tensions are starting to rise regarding the level of access Netflix is granted for the price it pays — said to be one tenth that of some F1 broadcasters.

On that note, though, there is also said to be an element of understanding from F1's big broadcasters that if Netflix can drive interest in the championship, then they stand to benefit from increased income if fans go on to watch their programmes and, in Sky's case, buy their products and channels.

But Netflix is also a subscription service — albeit a much cheaper one compared to buying Sky Sports. It's not the free-to-air model that many UK F1 fans would want the championship to include, as it did for so many years.

If F1 is determined to continue the pay-TV model that Bernie Ecclestone encouraged, then surely a return to the split offering with a terrestrial channel — used in the UK until the end of 2018 — would satisfy all parties once the current Sky deal expires in 2024.

After all, there's little point in capturing the attention of new fans ahead of the start of a new season, only to lose their interest because there's no easy way for them to follow the live action…

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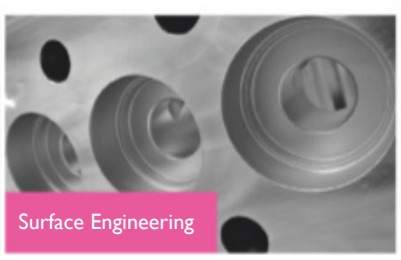
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Moto dice postponed

With coronavirus delaying the start of the new MotoGP season, some teams and riders may welcome the extra pre-season preparation time

LEWIS DUNCAN

The inevitable happened. Coronavirus caused the first two MotoGP rounds of the 2020 season to be cancelled or postponed. Although series promoter Dorna Sports had put a contingency plan in place to allow those travelling from major outbreak zones in Italy and Japan (from where much of the paddock hails) to enter Qatar more smoothly, the ever-changing situation meant the Qatari government had to take action and Dorna's hand was forced.

With Thailand banning large public gatherings in a bid to quell virus spread, the decision was taken to postpone the Buriram race to later in the year. So, if MotoGP is allowed into the United States in April, the season will start there.

The right decision was made and that's all there is to it. It's inconvenient for the fans, but do spare a thought for the paddock personnel and freelancers whose livelihoods face uncertain times.

Nevertheless, these cancellations are more than just lost races. They may well end up influencing the destiny of the 2020 world championship. With the season not starting for at least a month, reigning world champion Marc Marquez's early-season outlook just got a whole lot more positive.

The Honda rider has endured a winter of recovery after undergoing surgery on a right shoulder injury, and this has hindered his pre-season preparations greatly. In addition, the 2020 RC213V was petulant throughout testing, with HRC only making a breakthrough on the final day of the Qatar test. Seemingly, the root of all of the Honda's evils came from its new aerodynamic package, which made an already bad bike in the corners even worse.

> **"The cancelled races may well end up influencing the destiny of the 2020 world title"**

Honda's benefit, then, is twofold. First off, Marquez gets more time to get back to full fitness. No matter how bad a bike is, as demonstrated last year by his devastating run to a sixth MotoGP title, as long as he's fit, he can manage.

"Of course, when I'm at 100% physical condition I avoid these problems [with the bike that other Honda riders suffer] and I can fix," he said. "But if I'm not at 100% physical fitness then I cannot avoid and I am riding in the same level as Honda riders."

For Honda, it gets more time to develop its aero package. A switch to the 2019 version in the test yielded positive results, and it likely would have homologated that for the start of the season. Clearly, HRC thinks the version it has been trying since November is a step forward, and now it has at least four weeks to return to the drawing board. The technical regulations stipulate that aero packages must be homologated before the first race of the season, and teams are allowed one further change. With Qatar cancelled and Thailand postponed, Austin becomes the first round.

This same rule applies for the non-concession manufacturers (Honda, Yamaha, Suzuki, Ducati) regarding engine homologation. Most had already pretty much decided on what spec they would run this year, but a few more weeks potentially afford the opportunity for a bit more dyno testing and tinkering of motors.

Of course, radical changes are unlikely. None of the non-concession teams can test with race riders now, and leaving all the work to the test rider might not yield major gains. This is where HRC and Marquez still remain on the back foot a little. Marquez admitted after the final day of the Qatar test that he'd have to go back over numerous items to retry in the coming race weekends now that Honda has found the way forward.

But, should the season start in Austin and continue from there to Argentina, Marquez stands a very good chance of winning both — regardless of where the bike is at. Last year's crash aside, he's never been beaten at the Circuit of The Americas and he devastated the field at Rio Hondo last season.

Bad news, then, if you're name is Maverick Vinales. The Yamaha rider comes into this year as Marquez's strongest rival, based on his performances on the M1 across winter testing.

Many riders were quick to point out Vinales's long-run pace as something to be concerned about, and his single-lap speed is as strong as ever. Having worked hard to fix his weak point of early-lap pace during races, and with the Yamaha fitted with the 'holeshot' device to boost his launches, Vinales would have been very hard to beat in Qatar. With the Yamaha always going well in Thailand, Vinales stood a very strong chance of inflicting big damage to a Marquez still working to get fit on a bike still being fettled.

Vinales hasn't lost sight of the bigger picture, but his comments in a Yamaha press release on the loss of the first two rounds is primed for reading between the lines.

"It's a shame that the Qatar GP has been cancelled for us and that the Thai GP has been postponed, because these are tracks that I really like, and I think that I'm very strong there," he said. "We finished the Qatar test with very positive feelings, so I was impatient for the first race."

Should it get to the end of the year and Vinales has lost the championship to Marquez by not very many points, it wouldn't be unreasonable to point the finger at coronavirus.

P34 MOTOGP PREVIEW

WIN

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For the 78th Goodwood Members' Meeting across the 28-29 March weekend

Tickets for the Members' Meeting are usually only available to book for patrons of the Goodwood Road Racing Club, which means it's a race event that feels altogether more intimate than the Revival or Festival of Speed.

The Gerry Marshall Trophy races – for 1970-82 Group 1 saloons such as the Ford Capri, Rover SD1 and Chevrolet Camaro – have proved a smash hit with fans over the years and will return in 2020.

A new arrival for the Members' Meeting is the Rally Sprint stage. Four decades' worth of World Rally Championship machinery will compete down the Goodwood Motor Circuit's main straight, the pitlane and Woodcote corner across both days.

The highly anticipated track parades, celebrating specific motorsport themes each year, will spotlight the success of Jaguar's Group C sportscar programme and the revolutionary Lotus 72, which celebrates its 50th anniversary in 2020.

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YOUR SAY

All the people who pay serious money to buy, prepare and race their cars are not particularly keen to have them smashed up at the first corner

RICHARD WEST

Masters made the right decision

Ron Gammons' criticism of Ron Maydon's Masters organisation in my opinion really has not been well thought through (Your Say, 27 February).

What Maydon and his team worked out from day one is that theirs is a leisure business – they are providing enjoyment for competitors and their families. All that Masters is doing is filtering out those who have a proven track record of not driving hard yet fairly. This has nothing to do with clerks of the course, whose remit is to react after an event.

All the people who pay serious money to buy, prepare and race their cars at these events are not particularly keen to have them smashed up at the first corner. They want to go home on Sunday night thinking that was a great weekend shared with a load of like-minded people in a safe, competitive environment.

While as a spectator, rolling starts for single-seaters are not everyone's cup of tea in Europe, this is a logical method of protecting both competitor and vehicle.

Masters wants people to enjoy the whole event on and off track, and if it's by stopping overly aggressive driving, then I admire both Masters' explanation of this and its execution. If they lose a couple of entries because of that decision, then it can only be good in the long term for both the sport and the people who spend huge amounts of money and effort in enjoying their racing.

Richard West
Northamptonshire

Racing Point in the pink?

Interesting watching Formula 1 testing in Spain, and how Racing Point (right) has come on leaps and bounds. Great news for them, although it's only testing of course. Be intriguing how they do in Melbourne when the pressure is on.

Lots of comments on how the car looks like a direct copy of last year's Mercedes, but surely imitation is a form of flattery, and it's only similar to privateers buying cars 'off the shelf', as in years gone by.



A fascinating year ahead in this final iteration of the current designs. Here's looking forward to an exciting, close season.

MA Smith
By email

Hoping Ryan's now feline fine

Until reading last week's magazine, it had not registered that Ryan Newman was classified as a finisher in the Daytona 500, being placed ninth – was that one place for each of the lives he used?

Graeme Innes-Johnstone
Elland, West Yorkshire

Hats off to the greatest era of club racing

Your Thruxton 1973 retrospective (Autosport National, 27 February) brought back happy memories of the best era of club racing, but were baseball caps ever RAC-approved safety kit?! Richard Lloyd appears to be wearing one in his Camaro – where was his helmet?

Tim Barrett
By email

We reckon the shot was taken on his post-race lap of honour – ed

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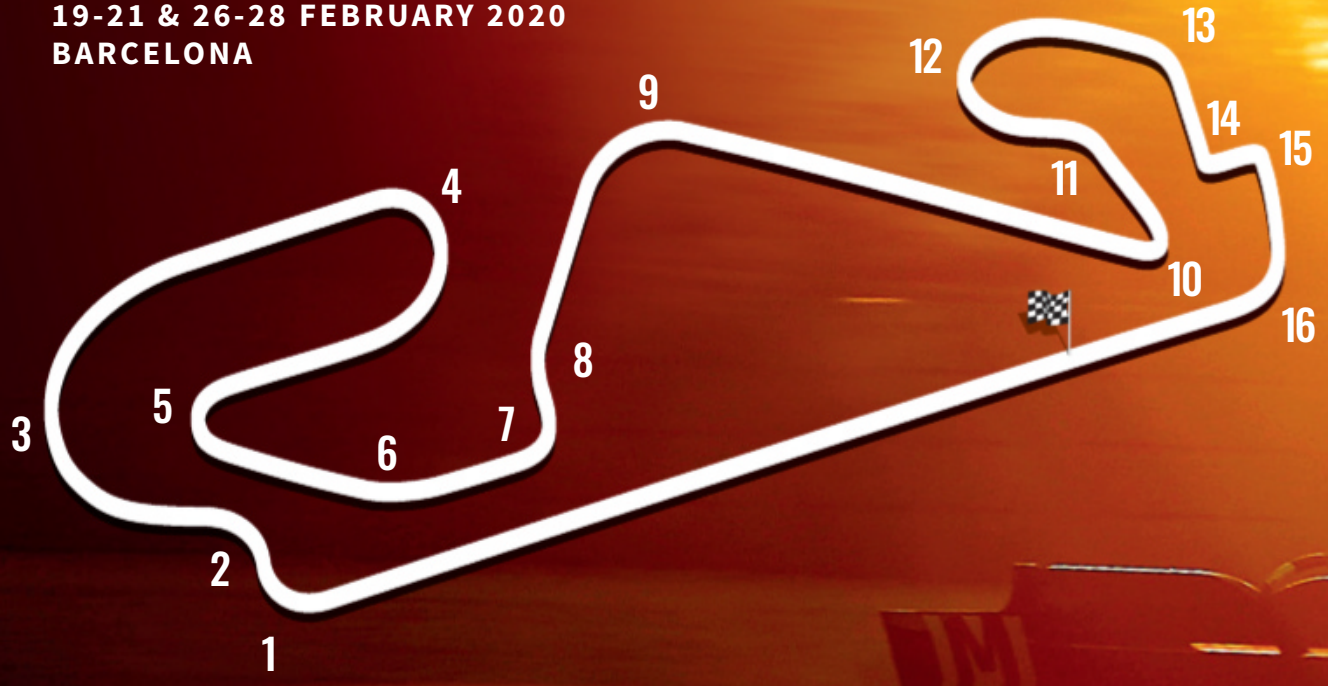
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TEST REVIEW

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WHO WON THE TESTING WAR?

As ever, testing doesn't tell the full story, but we've examined the stats and on-track performances to bring you our assessment of the leading contenders

ALEX KALINAUCKAS

PHOTOGRAPHY motorsport IMAGES

FORMULA 1's 2020 PRE-SEASON is over. The next time the cars hit the track, there won't be any hiding.

Over six days of testing, spread throughout two weeks at the Barcelona track, a cagey atmosphere endured. As usual, 'the times are irrelevant', 'we'll only know where we stand in Melbourne' and 'we're focused on ourselves' were the overriding insistences. And yet, it was possible to piece together a picture — albeit one that is heavily clouded by secrets and caveats — regarding the form book heading to the first race, which, at the time of writing, is still Melbourne on 15 March, although the coronavirus outbreak could yet dramatically alter the 2020 calendar.

Before we get to the picture created in testing for the new campaign, it's important to stress again that any analysis of the running recorded at Barcelona is an educated guess using the timing data collected on site around other media engagements, information gleaned from contacts, and just watching the cars out on circuit from various trackside vantage points.

Ultimately, the picture is incomplete, thanks to the closely guarded secrets that only the individual teams will know regarding the state their cars were in each time they sent them out on track throughout the six days of running.

But let's start with the headline time and the team that set it: Mercedes. It seems the squad that has dominated F1 since the start of the V6-turbo-hybrid era will again head into the new campaign as the firm favourite. Valtteri Bottas's 1m15.732s on C5 tyres, the softest Pirellis available, from the first test went unbeaten in week two, although he did also collect the quickest time in the second test with his 1m16.196s, again on C5s, on the afternoon of the final day.

It appears that Mercedes has again packed on downforce with the W11, which could be seen by the car's performance throughout the Barcelona lap on the last day. Bottas gave away a massive 0.394 seconds in his best sector one time to Racing Point's »

TEE



Mercedes W11 puts team in strong position

SUTTON

Sergio Perez, who topped the segment for the day on 21.605s. In sector two, Bottas closed to 0.049s from Charles Leclerc's leading 28.191s, but in the final sector Bottas was on top with a 25.942s, with team-mate Lewis Hamilton (who drove the W11 in the morning) in second place, 0.06s adrift. Esteban Ocon got closest on 26.129s for Renault, but Red Bull and Ferrari were 0.285s and 0.371s slower respectively with Max Verstappen and Leclerc.

This is important, because Barcelona's third sector contains the Turn 10 hairpin and has several slow-speed turns, which is where Mercedes shone compared to its rivals in 2019. It has clearly not lost this advantage, and its 2020 challenger can keep its tyres alive.

Where Mercedes is under pressure is in the reliability stakes. The team had to swap engines twice over the course of the two tests, with a failure for Bottas curtailing his running on the second afternoon of test one, and an oil-pressure anomaly for Hamilton ending his day in the equivalent session last week. This, allied with power-unit problems also blighting customer squad Williams's testing to a degree, is an issue, and Mercedes knows it. "We clearly still have some more work to do on the reliability to get us up to the standard that we expect by the start of the season," says Mercedes technical director James Allison.

The picture behind Mercedes is incredibly complicated, but there are indications that Red Bull will head into the season second to the reigning champion squad in the pecking order. The team did not appear to do much long running throughout testing, but Verstappen ended up second in the overall teams' times chart – with a 1m16.269s. But he did that on the slightly harder C4 rubber, which suggests Red Bull has more potential it is trying to keep under wraps. It could be that the team is much closer to Mercedes


SUTTON

Binotto insists Ferrari is not hiding performance



than it was willing to reveal in testing, which sets up the tantalising prospect of the two squads that dominate F1's results over the previous decade going at it for glory.

Watching trackside, the Red Bull looked nailed through all the various corner types at the Barcelona track, while the Ferrari looked like it had a consistent problem with understeer that was giving Leclerc and Sebastian Vettel cause for concern behind the wheel of the SF1000.

Although the performance of the Honda power unit remains a question mark, given its record, it can be fairly assumed that Red Bull will start the season as the closest challenger to Mercedes.

A final reason to land at this conclusion comes from Ferrari team principal Mattia Binotto, who still maintains his squad is "certainly not the fastest car at least here in Barcelona during the testing" and says "it seems that our main competitors are certainly faster".

Verstappen and Christian Horner did not appear to be under pressure in a joint press conference on Friday, with team principal Horner saying: "It's been a pretty positive pre-season for us." Both Verstappen and team-mate Alex Albon had several spins, but if the RB16 has an inherent balance issue it wouldn't generally

"THERE ARE INDICATIONS THAT RED BULL WILL HEAD INTO THE SEASON SECOND TO THE MERCEDES SQUAD"

Red Bull's improving Honda engine may help team catch Mercedes

TEE



New Ferrari seemed to suffer from understeer

look so strong when watching trackside. Add to this consideration the wet start that preceded Verstappen's offs on Thursday and the high winds at Barcelona this week.

And so, we come to Ferrari. The pecking order seems to have not changed dramatically compared to 2019. While Horner says the gap to the midfield has "concertinaed" towards the top three given the stable regulations, it seems they remain a trio in their own class.

As already explained, we are placing Ferrari third because of Binotto's assertions, but the team also ended up with the fourth-fastest overall time of testing, Leclerc's 1m16.360s being set on C5s on the final day. Using the data Autosport has gathered, a look at Ferrari's race-simulation running in the last two days of test two gives an indication of how the team looks in the longer-effort stakes.

On Friday afternoon, Leclerc did a 60-lap run, excluding in/out-laps, all on the hard C2 tyres, which Ferrari would not be able to do in an actual race per the change of compound rules. His average pace went from 1m22.970s in stint one to 1m21.914s in stint two, and then he lapped at an average of 1m20.595s in the final stint. This indicates he had a heavy fuel load onboard and burned it off, as it can be estimated that a car fat with fuel would lap Barcelona in the 1m22s-1m25s bracket.

Ferrari also tried a race sim last Thursday, which was cut short when Hamilton's engine issue caused a red flag. Vettel went from an average of 1m24.090s over 20 laps on C2s, to 1m22.971s over 16 laps, also on the C2s. He later returned to long running, again on C2s, for 24 laps. With two slow outliers for overtaking traffic removed, his average was 1m22.335s during this stint.

Hamilton looked as if he was also set to do a full-race sim at the same time — his times were at a similar level to Vettel's in the 1m22s/1m23s bracket, indicating higher fuel — but the stoppage cut that short.

There had been speculation that Ferrari was holding back with its power unit in test one. But Binotto explains "we are not hiding — that is our true performance", and there was no sudden increase in speed. The team blamed extra drag generated by the downforce-boosting parts it has plumped for on the SF1000, as well as a focus on improving reliability and its straight-line deficit. And yet, there was also the small matter of the private "settlement" the FIA has made with Ferrari regarding its investigations of its 2019 engine. While there are no suggestions of impropriety from the end-of-testing announcement alone, expect this issue to be loudly revisited by the team's rivals in the coming months.

Mercedes and Red Bull seemed to largely concentrate on shorter, consistent runs on the C2 and C3 rubber throughout testing, which is understandable given the rules stability and also the tyres remaining the same from 2019.

Although this means we don't have the data to make a direct comparison to Ferrari on the long-run data, teams are able to make sophisticated estimations using lower fuel loads on shorter runs, and Mercedes in particular looked best over these distances — hence the team's status as favourite once again.



DUNBAR

Will Mercedes' DAS make a difference?

THE VIEW OF EX-FERRARI MAN RODI BASSO

As the 2020 Formula 1 rules remained stable, all the new cars showed up at Barcelona featuring the incremental improvements teams pursue with the minimum possible impact on weight: smaller air ducts, slimmer rear shapes, more aero-friendly suspensions, and more power.

Mercedes won the prize for moon-shooting ideas with its dual-axis steering (DAS) system, but this will probably be more about providing an edge than big gains in lap times.

The Barcelona circuit provides an understanding of some key handling characteristics, which we can see by analysing the different sectors. A strong car in sector one is a car with high top speed that is agile in turning in and changing direction. The best sector times here are usually reflected by the top speed classification – but beware the effect of slipstream! The fastest cars in sector two benefit from a low level of understeer in the first two corners (Turns 4 and 5, which are low speed) and precision in mid-speed corners (Turns 7 and 9). The last sector has the highest impact on lap time, as it requires good braking stability and traction. This is where it's important to have a high and consistent grip level, with the lowest possible influence coming from the high steering, yaw and roll car angles.

Let's look at the timing data from sector three of the final day of testing. This is useful because the teams tested race distance and qualifying simulations, so the variability on fuel load is within a narrower band (low fuel is estimated within 10-20kg in these qualifying attempts). With this assumption, Mercedes is still showing the best times and Red Bull seems much closer this year, if not faster than Mercedes – Max Verstappen set the team's fastest time of testing on the final day, but on the harder 'soft' compound (C4) and made a mistake between T11 and T12.

If the teams come to the first race using the same car specifications with which they left testing, then – hopefully – we may see much closer racing this year.



DUNBAR

Verstappen was closest to Mercedes on final day

THE MIDFIELD BATTLE

Behind Ferrari comes 'Class B', led, it seems, by Racing Point. The team left testing with the fifth-fastest time overall – Sergio Perez's 1m16.634s – and there is a feeling that it was holding back somewhat on outright speed.

First of all, Perez held the best sector one time on the final day of test two (page 32), and at several points during the day he also looked set to improve his best lap before losing time – apparently without making any mistakes – in the final sector.

As for the long-run data, Racing Point did a race run last Friday. Perez was straight out of the pits in the afternoon session and over 13 laps on the C3s in his first stint he averaged 1m24.126s, then ran at 1m23.196s over 22 laps on the C2s, before ending with 23 laps, still on C2s, at an average of 1m21.706s.

In what is a congested midfield, it looks as if McLaren heads Haas behind Racing Point.

Although we logged Haas as producing a better long-run effort on Friday morning, it was over a shorter distance of 43 laps compared to some of the other race sims we followed. Romain Grosjean completed 20 laps on the C3 tyres at 1m23.638s, then lapped at 1m21.629s over 14 laps (with one outlier removed) on C2s, before going back onto C3s for eight laps in which he averaged 1m22.296s just before the lunch break.

Looking at what was a heavily disrupted race sim for McLaren on Thursday, Lando Norris did 16 laps at 1m24.332s on the C3s and then 16 laps on the C2s at an average of 1m23.697s. But he did have to run behind Alfa Romeo's Antonio Giovinazzi for much of his effort, saying later that the Italian "deeply affected me undercutting".

But the McLaren looks that bit more stable and better overall compared to the Haas, which had a pair of crashes in the first test, when watching their respective behaviour trackside. Haas also ended up with the slowest time in the combined teams' classification – Grosjean's 1m17.037s.

Renault is very hard to place in our educated-guess order. This is despite Daniel Ricciardo setting the third-fastest lap of testing overall in the teams' classification with his 1m16.276s on C5s on the final day. During a race run on Wednesday (26 February), Esteban Ocon started on C2s, with an average over 18 laps at 1m24.538s. He then went on to the slightly softer C3s, with an average over 18 laps of 1m23.112s (with two outliers removed), before ending with 15 laps on C2s lapping at 1m22.046s. But things did look better for Renault on the last day of the first test, when Ricciardo started with 18 laps on C2s, lapping at an average of 1m23.929s. He then completed 17 laps on the C3s at 1m22.783s (with one outlier removed), and ended with 22 laps on C2s at an average of 1m21.450s (with one outlier removed). Ricciardo then stopped on track at the end of that final stint and caused a red flag.

It could be that Renault has more long-run pace than it is letting on, but it wouldn't be too much of a stretch to assume Ricciardo's headline time was Renault showing its full hand while some of its rivals held back.

AlphaTauri and Alfa Romeo are also in the mix in the midfield, probably in that that order behind Renault, but it is too close to call.

AlphaTauri had Pierre Gasly do a race run on Thursday afternoon, which was also disrupted by Hamilton's stoppage. Gasly completed all his stints on the C2 tyres – with 21 laps at an average of 1m24.568s, then 20 laps at an average of 1m23.909s, and he ended with 17 tours at 1m22.584s before the red flag cut his run short.

Looking at Alfa Romeo's concurrent disrupted and shortened long stint for Giovinazzi, running with Norris, on Thursday afternoon, he started with 18 laps on C2s at a 1m25.216s average, then did 23 laps on C2s at an average of 1m24.198s.

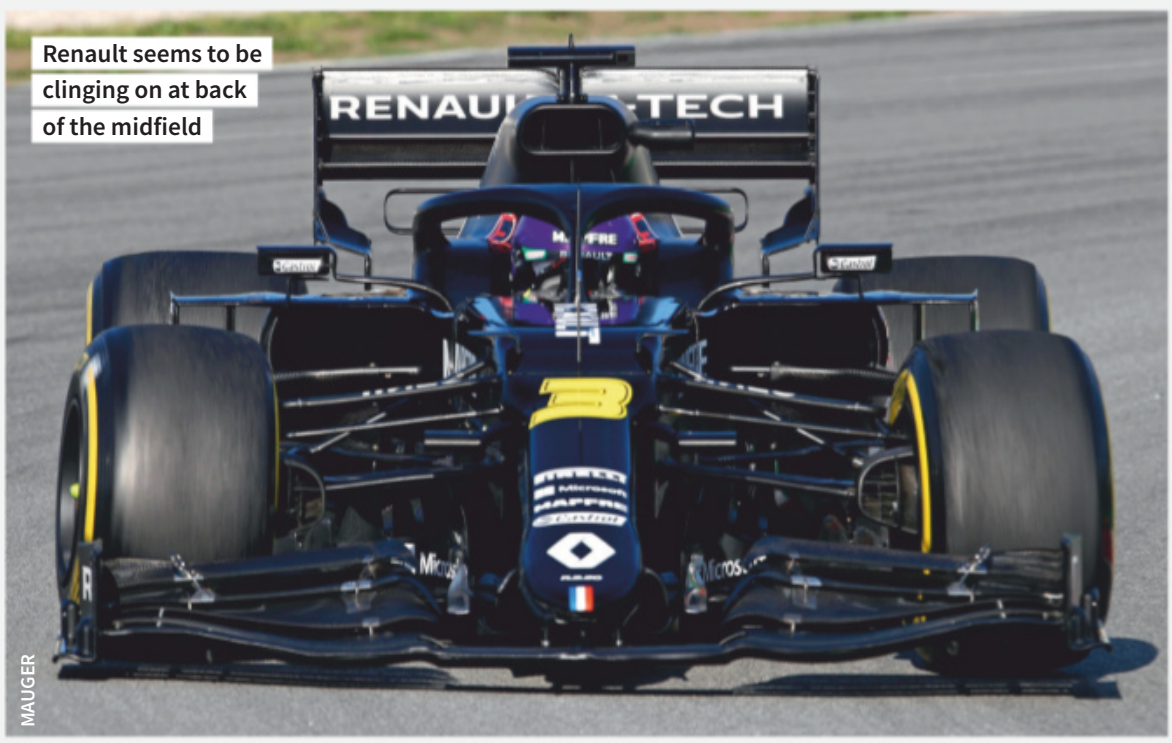
We clocked Williams completing lots of different run arrangements – mainly to assess the improvements it has made over the winter – across the six days of testing. But we'll leave it to George Russell on where Williams stands.

"No doubt we're in a better position," he says. "But I think realistically, we are still the slowest car."


Perez's pace in Racing Point hints that team is head of midfield

DUNBAR

"AT SEVERAL POINTS DURING THE DAY PEREZ LOOKED SET TO IMPROVE HIS BEST LAP BEFORE LOSING TIME – WITHOUT MAKING MISTAKES"


Renault seems to be clinging on at back of the midfield

MAUGER

POWERED BY motorsport STATS

TESTING DATA, BARCELONA, 26-28 FEBRUARY

BARCELONA TEST TIMES (TEST TWO)

POS	DRIVER	CAR	DAY ONE	DAY TWO	DAY THREE	TYRES FOR FASTEST LAP
1	**Valtteri Bottas**	Mercedes W11	1m18.100s	1m17.985s	**1m16.196s**	C5
2	**Max Verstappen**	Red Bull-Honda RB16	1m17.347s	1m17.738s	**1m16.269s**	C4
3	**Daniel Ricciardo**	Renault RS20	1m18.214s	1m18.395s	**1m16.276s**	C5
4	**Charles Leclerc**	Ferrari SF1000	1m18.244s	-	**1m16.360s**	C5
5	**Lewis Hamilton**	Mercedes W11	1m17.562s	1m22.425s	**1m16.410s**	C5
6	**Esteban Ocon**	Renault RS20	1m21.542s	1m18.013s	**1m16.433s**	C4
7	**Sergio Perez**	Racing Point-Mercedes RP20	1m17.428s	-	**1m16.634s**	C3
8	**Carlos Sainz Jr.**	McLaren-Renault MCL35	1m18.221s	-	**1m16.820s**	C4
9	**Sebastian Vettel**	Ferrari SF1000	1m18.113s	**1m16.841s**	-	C5
10	**George Russell**	Williams-Mercedes FW43	1m18.535s	-	**1m16.871s**	C5
11	**Daniil Kvyat**	AlphaTauri-Honda AT01	1m17.456s	-	**1m16.914s**	C3
12	**Robert Kubica**	Alfa Romeo-Ferrari C39	**1m16.942s**	-	-	C5
13	**Romain Grosjean**	Haas-Ferrari VF-20	1m18.670s	-	**1m17.037s**	C4
14	**Pierre Gasly**	AlphaTauri-Honda AT01	1m17.540s	**1m17.066s**	-	C5
15	**Lance Stroll**	Racing Point-Mercedes RP20	1m17.787s	**1m17.118s**	-	C3
16	**Nicholas Latifi**	Williams-Mercedes FW43	1m18.300s	**1m17.313s**	-	C4
17	**Kimi Raikkonen**	Alfa Romeo-Ferrari C39	1m19.515s	-	**1m17.415s**	C3
18	**Kevin Magnussen**	Haas-Ferrari VF-20	-	1m18.225s	**1m17.495s**	C4
19	**Alexander Albon**	Red Bull-Honda RB16	**1m17.550s**	1m18.393s	1m17.803s	C2
20	**Lando Norris**	McLaren-Renault MCL35	1m18.826s	**1m17.573s**	-	C2
21	**Antonio Giovinazzi**	Alfa Romeo-Ferrari C39	-	**1m19.670s**	-	C3

The fastest time for each driver is marked in bold, with fastest time of the day in red

LAPS COMPLETED

DRIVER	LAPS COMPLETED
Leclerc	261
Perez	238
Vettel	229
Kvyat	221
Bottas	216
Sainz	209
Latifi	208
Russell	205
Grosjean	193
Hamilton	193
Ocon	186
Ricciardo	177
Stroll	173
Norris	170
Raikkonen	166
Gasly	164
Verstappen	160
Albon	149
Magnussen	140
Giovinazzi	92
Kubica	53

TEAM	LAPS COMPLETED
Ferrari	490
Williams	413
Racing Point	411
Mercedes	409
AlphaTauri	385
McLaren	379
Renault	363
Haas	333
Alfa Romeo	311
Red Bull	309

ENGINE	LAPS COMPLETED
Mercedes	1233
Ferrari	1134
Renault	742
Honda	694

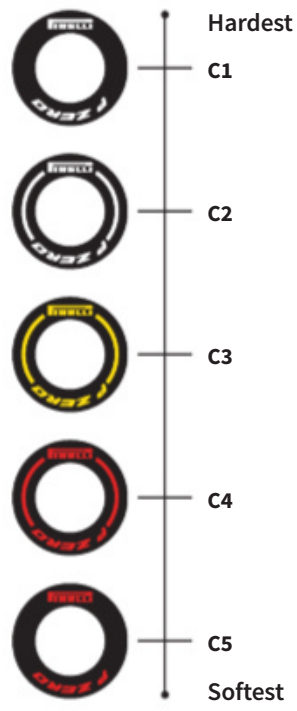
TOTAL LAPS COMPLETED BY ALL CARS
3803

RED FLAGS
7

SPEED

SPEED TRAP (ENGINES)	
Ferrari (Alfa Romeo)	207.5mph
Mercedes (Racing Point)	203.2mph
Honda (AlphaTauri)	198.2mph
Renault	197.0mph

TYRE GUIDE



COMBINED FASTEST TIMES OF BOTH TESTS

POS	DRIVER	FASTEST TIME
1	**Valtteri Bottas**	1m15.732s
2	**Max Verstappen**	1m16.269s
3	**Daniel Ricciardo**	1m16.276s
4	**Charles Leclerc**	1m16.360s
5	**Lewis Hamilton**	1m16.410s
6	**Esteban Ocon**	1m16.433s
7	**Sergio Perez**	1m16.634s
8	**Carlos Sainz Jr**	1m16.820s
9	**Sebastian Vettel**	1m16.841s
10	**George Russell**	1m16.871s
11	**Daniil Kvyat**	1m16.914s
12	**Robert Kubica**	1m16.942s
13	**Romain Grosjean**	1m17.037s
14	**Pierre Gasly**	1m17.066s
15	**Kimi Raikkonen**	1m17.091s
16	**Lance Stroll**	1m17.118s
17	**Nicholas Latifi**	1m17.313s
18	**Antonio Giovinazzi**	1m17.469s
19	**Kevin Magnussen**	1m17.495s
20	**Alexander Albon**	1m17.550s
21	**Lando Norris**	1m17.573s



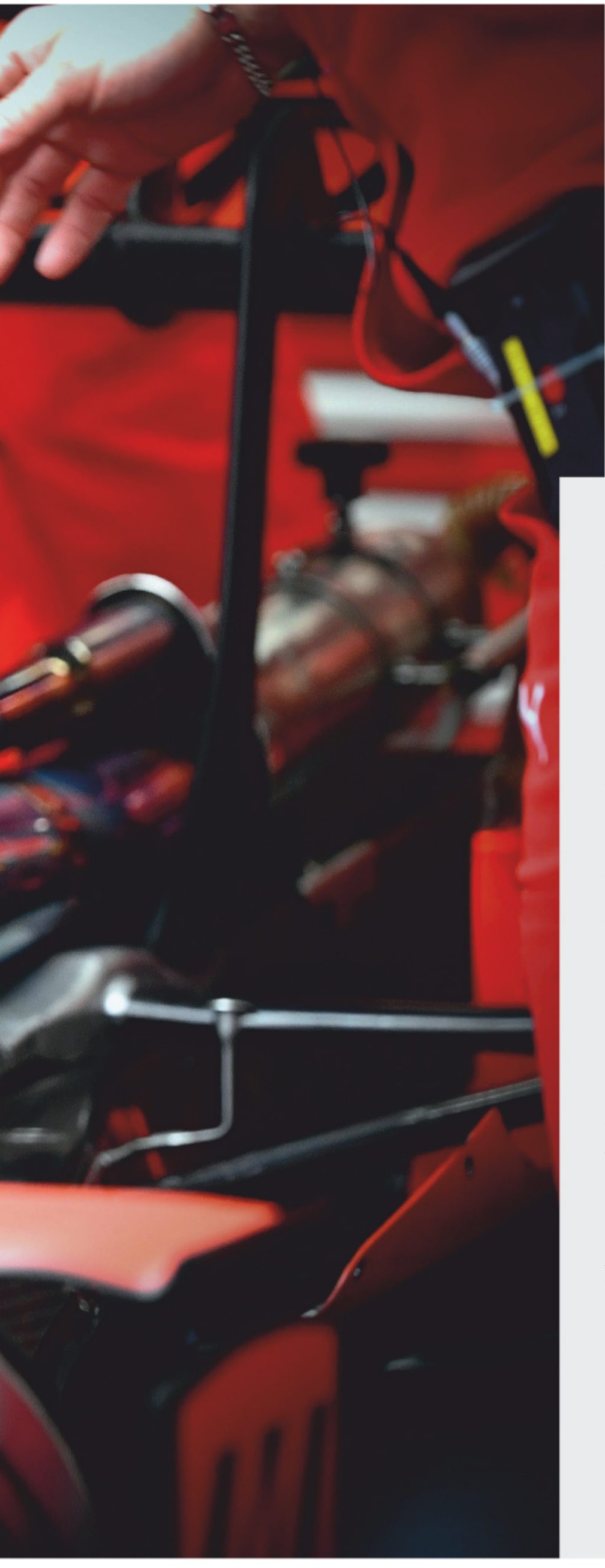
F1 2020

TECHNICAL FOCUS

F1 testing's week two was remarkable for the lack of major upgrades. At least the FIA and Ferrari provided plenty to talk about

JAKE BOXALL-LEGGE, GIORGIO PIOLA AND TIM WRIGHT

PHOTOGRAPHY **SUTTON** motorsport IMAGES



ANYONE EXPECTING A REAL SMORGASBORD OF upgrades for the second stint of pre-season Formula 1 testing at Barcelona was probably left a little disappointed, as the cars appeared with only minor changes between the two weeks.

There was no repeat of last year, when Mercedes notably turned up with a W10 completely rehashed from a week earlier, while other teams brought numerous items as they grappled with the new-for-2019 aero regulations. Speculation suggested that a couple of teams would perhaps try that approach this time around, but ultimately the second week lacked the overall technical intrigue that last year's tests provided.

Perhaps, with a stable ruleset, teams are finding that the law of diminishing returns is beginning to bite. Although there were a few new parts peppered throughout the field in the final week, there were no innovations that could command the same column inches that Mercedes' dual-axis steering system could – at least, until the FIA released a statement that it had reached a settlement with Ferrari over the legality of its 2019 powertrain...

Let the controversy begin.

WRIGHT OR WRONG?
Tim Wright's view on the Ferrari fallout

Last year several teams questioned how Ferrari had a straightline speed advantage and whether it could be getting around the 110kg/hour fuel-flow limit with its powertrain.

The FIA supplies the same fuel-flow sensor to all teams, and this year there will be two units, so it should be a fairly bulletproof system. Could it be that Ferrari was using some electronic wizardry to fool the recorded signal?

It seems strange that it has taken the FIA three months to investigate; surely it must be obvious from data if the limit has consistently been breached, or that in the wiring loom there wasn't an extra piece of kit. Surely, if everything was legal, the FIA would have declared that.

The timing of the announcement is also strange, released just as the teams will be packing up to fly off to Australia. It would seem that the FIA was softening the blow, but it also leaves more questions unanswered.

What is the deal that Ferrari has agreed to that lets it off the hook? Agreeing to help the FIA "to improve the monitoring of all Formula 1 power units, as well as assisting the FIA in other regulatory duties and in its research activities on carbon emissions and sustainable fuels" sounds to me that something was spotted in its investigations but, not wanting to risk losing Ferrari from the F1 championship, the FIA has come up with a deal.

It is curious that Ferrari has not shown the same speed as last year during this year's two tests, and it's telling that Sebastian Vettel has suggested that the car is too draggy! Trackside viewing has shown that the car suffers greatly from understeer, which might suggest that the team has taken off front downforce to help the straightline speed and instead is protecting the rear with more downforce. I saw the state of the rear tyres during the first test and it does seem that the team is suffering at both ends trying to fix the problems.

With the current engines, the turbo spins at very high speeds. Therefore it is a battle for the designers to ensure that bearings and seals perform correctly at very high temperatures. Oil is fed to the turbo and compressor at high pressure, so it's inevitable that over the course of a race some of it will leak past the seals.

Given that teams are restricted on the number of engines they can use, it becomes critical that each component works at an efficient level, so as the compressor feeds air through the intercooler to the engine inlet it is likely that oil will then end up in the intercooler. Teams have used oil-burning as a way to boost performance, and so being able to control those leaks and vapourise the oil to bring it into the combustion chamber seems to be another method of boosting overall power.

Ferrari finds itself embroiled in another scandal and still needs to close the gap to Mercedes. »



REAR-WING CHANGES

Generally speaking, the development of a rear wing is a lot more restricted compared to its front-mounted counterpart, although there is some wiggle room for variation.

They come in different shapes and sizes, of course, and both Williams and Ferrari tacked on spoon-shaped wings at different points of the test last week, perhaps looking to assess parts for some of the more high-speed venues on the F1 calendar. By keeping the full-camber central section, the most effective part of the wing is retained for downforce, but reducing it on the outboard sides inhibits the amount of drag it produces.

Further rear-wing explorations at Barcelona were pursued, particularly in the way the teams mounted them to the car. In recent years teams have used 'swan-neck' mounts, which connect to the upper (pressure) face of the wing's mainplane, rather than the lower (suction) side – boosting the overall downforce output.

Mercedes did try a single-pillar wing mount, perhaps attempting to reduce drag. It had foregone the full swan-neck design and used some of the DRS housing to strengthen the mounting, but the team ultimately reverted to its usual twin-pillar design, presumably unconvinced by the overall strength of the single variant.

ALFA ROMEO'S WEEK-TWO UPDATES

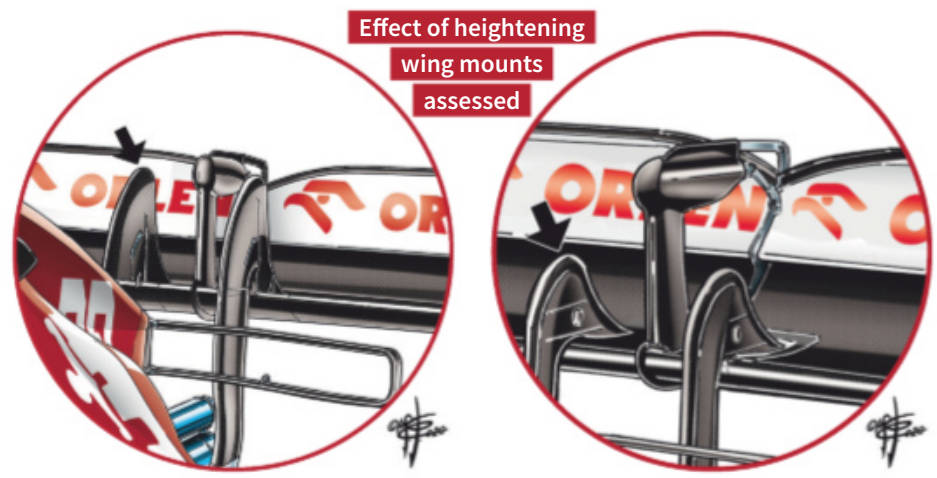
After spending 2019 firmly among the midfield, Alfa Romeo has its eyes on climbing up the order hoping to challenge for the pseudo-honour of 'best of the rest'. For week two, the team brought a flurry of new additions to its C39, aiming to build on an encouraging first week of running.

A slightly reworked front wing emerged, building on the team's eventual move to a full five-element wing at the end of last season, and featured a detached second element to strengthen the overall tip vortex built by the wing elements. The wing still follows the dramatic anhedral arrangement, so it's interesting to see the scope of development Alfa Romeo has had within quite a restricted regulatory box.

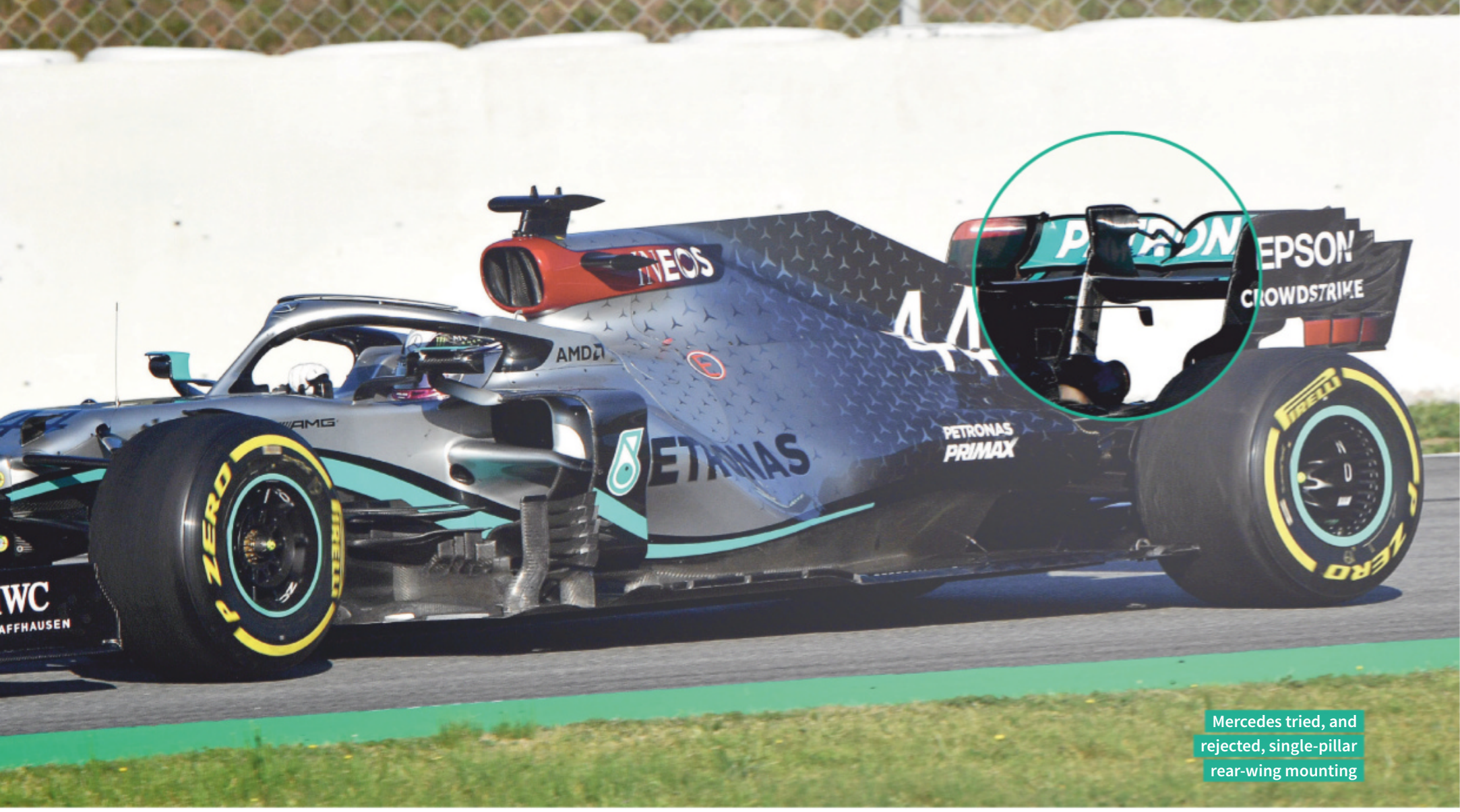
Also at the front, Alfa returned to using a smattering of winglets mounted to the chassis bulkhead – albeit different to last year's 'eyebrow'-style fins. Now mounted as two elements either side of the S-duct outlet, these break up into four little horizontal winglets to deflect airflow around and down the flanks of the car. Overall, each one develops a little bit of lift, but the overall aim is to manage airflow, so taking a minor hit on downforce in that area may yield more further down the car.

Alfa explored the effect of heightening its wing mounts, presumably looking to understand whether the airflow could be tidied up immediately before the rear wing. Those pair up with the fins added to the flanks – which appeared last year – to send airflow to the bottom of the sidepods.

The team also tried numerous engine-cover arrangements, returning to the mini shark-fin design used last year – to which the T-wing is mounted. Although the full-size fin will help to reshape airflow as it leaves the trailing edge of the engine cover, Alfa has probably found a way to keep the air sufficiently tidy on its old design before it reaches the rear wing.







Mercedes tried, and rejected, single-pillar rear-wing mounting

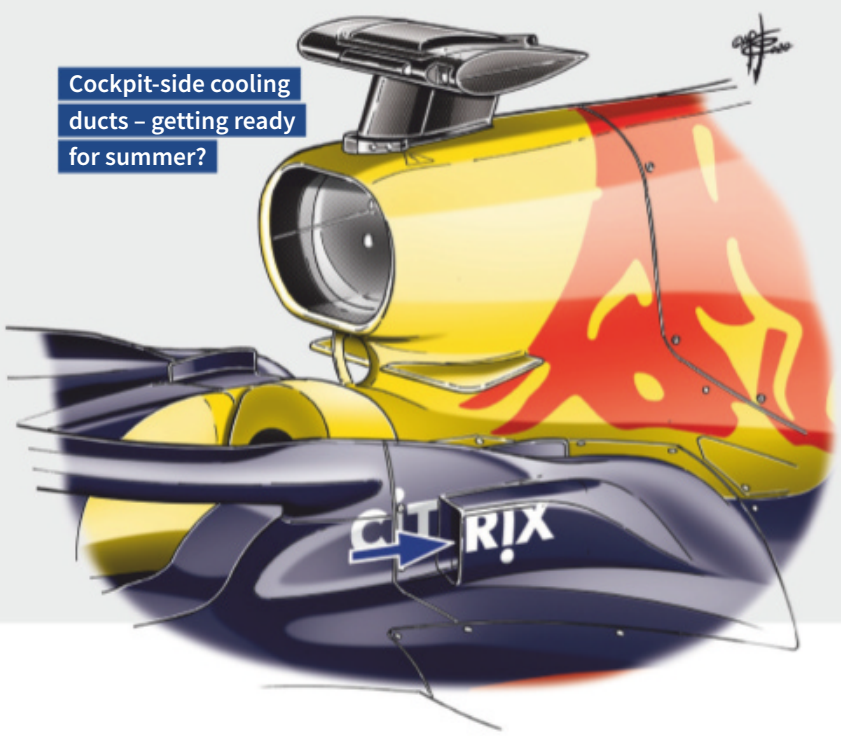
RED BULL RETOOLS COOLING

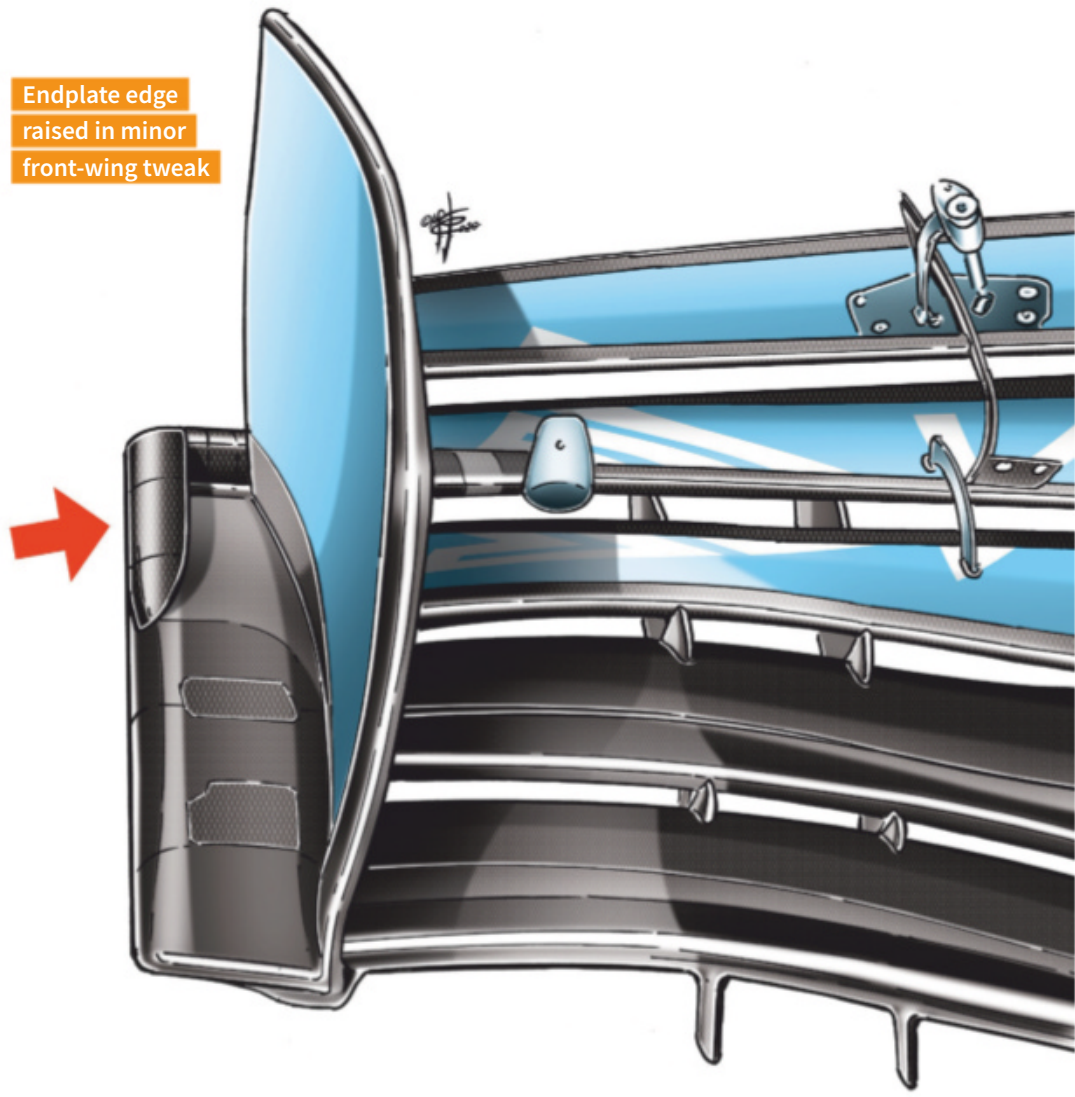
As is traditional in Formula 1, designers are forever pushing the limits of cooling. Red Bull, thanks to the boundaries set out by esteemed design chief Adrian Newey, has always been at the forefront of keeping its packaging as tight as possible.

For some races where the temperatures are lower, cooling rarely becomes a problem, but as the season waltzes towards climates far more befitting of summer, it must be considered a lot more. Perhaps looking forward, Red Bull nestled some extra cooling ducts next to the cockpit sides, giving the car a bit more leeway in hotter temperatures. This is part of the panel next to the halo mounting, which is frequently adjusted depending on the cooling requirements of the circuit.

It's interesting to see such an obvious inlet design mounted here, however. Either Red Bull is simply exploring options for hotter races – giving the team options for scenarios such as occurred at the Austrian GP last year, where the temperatures were unexpectedly high – or the RB16's cooling is a little bit borderline for the demands of the Honda power unit.

Red Bull also had a new set of turning vanes, developing a design similar to Mercedes' combination of vertical and horizontal elements to straighten out the turbulence from the tyre and turn it around the sidepod.





McLAREN STEPS UP TO THE (END)PLATE

Having managed to fight its way up to fourth in last season's constructors' championship following a few lean years, McLaren has quietly gone about its business at Barcelona in its efforts to move closer to the top three teams.

The team in orange seems to be particularly sanguine as a result, with team principal Andreas Seidl calling testing "by far the best start since many, many years for McLaren going into a winter test". It managed a total of 802 laps across the six days with no major incidents, so the team outwardly looks to be in good shape too.

Minor tinkering to the front wing heralded a slightly innovative approach to the footplate, raising the edge to presumably help the airflow spill outwards with greater guidance than before, and using the lip at the trailing edge in addition. It's a tiny change, but the front wings are so sensitive in modern F1 that every tweak can create a larger impact further down the car.

F1 2020

TRACKSIDE VERDICT

Our ex-Formula 1 driver – and Sky Sports pundit – on how the cars shaped up at Barcelona

KARUN CHANDHOK

PHOTOGRAPHY motorsport IMAGES



EVERY YEAR I GO TO PRE-SEASON TESTING and enjoy a couple of days of watching the new cars in action. It's interesting to see the cars live and there are always subtle nuances that you can pick up with a trained eye that you can't really see on television.

With testing now being repeated annually at the Circuit de Catalunya, I've also now got my favourite watching spots, which I go back to year after year because it gives me a good reference to see how things have changed from the previous season, as well as contrasting the cars relative to each other.

Before I go into the details of what I saw, I've got to say that my overriding feeling from testing is that the cars are getting a bit too good and comfortable for the drivers. When every car on the grid can take Turns 3 and 9 without the drivers thinking about a lift off the throttle, that's wrong. I remember being on the bus for the drivers' parade in 2010 when we were chatting about Mark Webber taking Turn 9 flat on his way to pole and the other drivers were all massively impressed. The 2021 regulations should make the cars harder to drive and therefore separate the good and the great drivers a bit more, which is exactly what should happen in motor racing, not just Formula 1.

The other big impression I got was that, unlike in the past, there really aren't any bad cars on the grid. They all look capable of delivering at least a low-1m16s lap time, which is bloody impressive for that circuit. It also meant I had to look harder for differences between the cars while also trying to factor in what programme they may have been on while I was watching. All a bit tricky, but here's my attempt at a pecking order based on what I saw from behind the barriers!

THE BIG THREE

The Mercedes W11 convincingly looks like the class of the field. The car seems easy to drive and I have no doubt that they never attempted anything close to a low-fuel run. When you look at the long runs, they can metronomically go lap after lap and just carry apex speed better than anyone else.

Watching at the Turns 1-2 sequence, they certainly have less understeer than most at the apex and are able to get the rear end to stick while the front pivots around the apex kerb. This slow-speed cornering ability was a real strength of the W10 from last year and the W11 seems to have carried that on. The dual-axis steering system may have grabbed all the headlines, but the effort gone into the rear suspension and the aero is a bigger indicator





Verstappen ponders interruption to Red Bull test progress

HONE

to me that there is no relaxing in Mercedes' quest for an incredible seventh consecutive world championship.

Turns 4, 7 and 12 are all good places now to judge performance in the medium-speed corners. The Ferrari seemed to be running heavy all week long and didn't seem as agile or as sharp on the nose as the Mercedes or Red Bull cars. The front end washes out a bit more than either of its rivals and you certainly can't get it to hug the apex and rotate as well as the Mercedes. This means the Ferrari drivers are off the throttle for a fraction longer and that's enough to add up to a lap-time deficit that was the trend last year.

The Red Bull seemed a bit more nervous at the rear and perhaps a bit more wind-sensitive. Certainly at the more wind-exposed corners, such as Turns 4 and 13, the drivers didn't look like they had as much confidence to attack the entry as Mercedes'. The turn-in and change of direction still looked sharp, but the rear stability didn't seem to be as good as the Mercedes'. This will of course have an effect on tyre wear across the long runs, so the big brains at Milton Keynes will be cracking on to find a solution. They started last year on the back foot and won't want to do the same in 2020.

Charles Leclerc's race run on the final day was the first proper »



"THE FERRARI DIDN'T SEEM AS AGILE OR AS SHARP ON THE NOSE AS THE MERCEDES OR RED BULL CARS"

Mercedes' status as class of the field is clearly established

SUTTON

66-lap run we had as a comparison and, factoring in track conditions, I would guestimate that the Ferrari and Red Bull seem similar on pace and are both about 0.3 seconds away from Mercedes (Max Verstappen did a good race run on day three and Hamilton on day two). This could of course change depending on the engine modes as I'm sure all three teams were 'sandbagging' but, judging trackside, I would be inclined to concur with these numbers from the race runs.

THE MIDFIELD SCRAP

Racing Point has certainly upset the midfield teams by rolling out a "Mercedes-inspired" design for the 2020 campaign (Zak Brown called it the "Copy Point", while "Tracing Point" has also been mentioned repeatedly by rivals). Either way, if I was Lawrence Stroll or Otmar Szafnauer, I would do exactly the same. Why not try to replicate the best car on the grid at a time when there's a single season of rules stability and you need to invest heavily in 2021?

Amid the various claims that the car is illegal, one of the more pragmatic rival team bosses raised a valid point to me, which was that they didn't really have a problem with Racing Point copying a one-year-old Mercedes because it effectively committed them to being a midfield team. What they would have a problem with is if Mercedes and Racing Point were sharing information with regards to the design of the 2021 programme when there's such a big reset in the rules. They are concerned that, with tight restrictions on windtunnel time, Mercedes could use its customer team's windtunnel allocation to test various development paths and share that information, which would give both an unfair advantage. I see their point and get the feeling this argument could rumble on.

On track, the Racing Point looks very good indeed. There's no way that a team can just look at photos and copy another team's design. They would have had to understand the philosophy and core concept so they can set up the car correctly, and they've clearly done that because it looks very driver friendly and confidence inspiring. The front end is much sharper than anything else in the midfield and the rear end stays very stable on entry, allowing the drivers to be aggressive with the steering and have good rotation at the apex.

The McLaren looks like the next best midfield car. The team seems to have built on a solid 2019 and, from my vantage point at Turns 1 and 2, Carlos Sainz Jr appeared to be able to change direction very well. Up at the long Turn 12, the MCL35 allowed the drivers to carry good speed on the way in, and run a tighter line with decent minimum speed and open the steering wheel to accelerate out better than most others. At the moment, I would say that McLaren is fifth best and could be in a big battle of development with Racing Point to see who comes out on top.

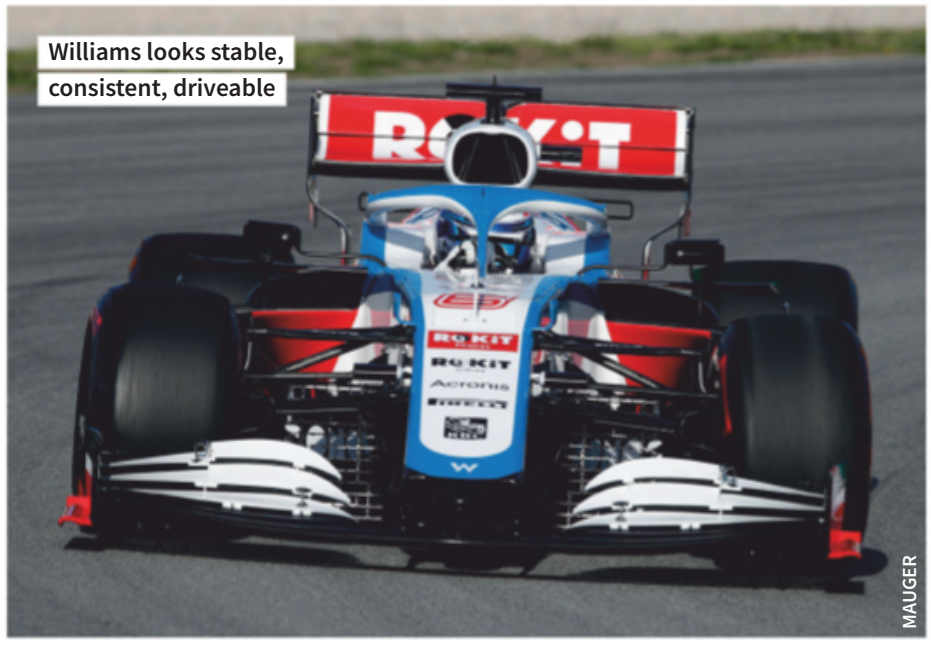
AlphaTauri and Renault look like they're the next two, and it's hard to pick who's ahead between them. The AlphaTauri looks like an easier car to drive, but that doesn't mean it's quicker. The front end doesn't seem as sharp as the McLaren's or the Racing Point's and the drivers are having to wait longer for it to bite than most others, especially in the longer corners like Turns 4 and 12. Understeer just bleeds lap time, so the team will need to get on top of that quickly.

There's been a lot of talk about the progress from the Honda power unit and that could be invaluable for AlphaTauri in the midfield battle, especially as Renault has talked about focusing on reliability and not power this year. There was one run where Pierre Gasly suddenly found a huge chunk of speed on the straight, and I was watching his lap so was sure he didn't get a slipstream from anyone. He aborted the lap and came into the pits so it may have gone under the radar, but I think that once again Honda was perhaps using the junior team to test the higher-power modes ahead of the season.

It's a big year for Renault after it slipped backwards in 2019, but it is going to need a big push throughout the season if the team wants to overhaul McLaren and Racing Point. It's got one of the best driver line-ups on the grid, with Daniel Ricciardo and Esteban Ocon, and has got no excuses for not getting back


SUTTON


Honda power could be AlphaTauri's trump card
SUTTON


Williams looks stable, consistent, driveable
MAUGER



up to fourth in the constructors’ championship.

The front end of the Renault RS20 seems to be set up differently from any other team on the grid. You could see showers of sparks from the front of the car soon after the apex of Turn 2 and it seemed like the nose was just buried into the ground. The team obviously manages to have a legal plank afterwards, so it’s just how it has chosen to set up the car, but it definitely is different from anyone else in terms of dynamic ride.

There’s a kerb on the exit of Turn 7 as you turn up the kink of Turn 8 and the Renault didn’t seem to ride that as well as anyone else. The front of the car seemed to aggressively rebound off it and you could see it wasn’t a comfortable ride for the drivers. The circuits in F1 are getting smoother every year, with flatter and flatter kerbs, so that in itself may not be a big problem, but it was another indicator to me that the front suspension set-up of the Renault is different.


Ricciardo was third fastest in second test

SUTTON

Like AlphaTauri, the Renault drivers also had to wait for quite a while in the longer corners before being able to pick up the throttle, chasing the front-end understeer. Unlike the others, though, when the front end did bite and grip up, it seemed to create a bit of rear instability, which could just be a matter of unlocking the right set-up rather than a fundamental issue.

The Alfa Romeo and Haas both look like they’re in similar territory in terms of lap time, with different strengths and weaknesses, while the Williams doesn’t seem to be far behind. The Alfa certainly has better ride quality over the bumps and kerbs than the Haas, but the front end on turn-in didn’t seem as positive. As the drivers went through the corner, you could see the Alfa struggling with more understeer too, but it does seem a bit easier to drive. The Haas drivers seemed to struggle a bit more to hit the same line lap after lap in the way that Kimi Raikkonen was able to when I was out watching. Overall though, like last year, I think the battle between Alfa, Haas, AlphaTauri and Renault could ebb and flow depending on the circuit.

For the first time in a couple of years the Williams seems to be a driveable car. Yes, you can make out that the cornering speeds are a bit down compared to its rivals, but at least it doesn’t seem to have the inconsistency and instability of the past two years. I remember watching at Turn 4 in 2018 and the drivers were sometimes using opposite lock even before the apex, while last year the late arrival of the car meant it just wasn’t going quickly enough for us to judge.

This year both drivers were comfortably flat through Turns 3 and 9 and actually looked like they could hustle the car around without it doing anything particularly unexpected. That’s a good base for the team to build on and will give the aero department a confidence boost that their correlation between the CFD and windtunnel and the track seems to be working reasonably well.

All of the testing form becomes irrelevant of course when we get to qualifying because, when the flag drops and the engines get turned up, the bullshit stops. Roll on Melbourne!

INSIGHT

MOTOGP PREVIEW



SEASON PREVIEW

WHO CAN CATCH MARQUEZ AND HONDA?

The multiple champion is still getting over injury. His bike hasn't been working properly. Suddenly the rest have a glimmer of hope...

LEWIS DUNCAN

PHOTOGRAPHY **GOLD AND GOOSE** motorsport IMAGES

As the final day of MotoGP pre-season testing began, Honda was in trouble. The 2020 RC213V had seemingly been born bad. The front end and turning issues of its predecessor — problems much maligned by its riders last season — persisted, and had actually worsened. "Honestly, yesterday and the first day, I was worried about the situation," reigning world champion Marc Marquez admitted at the close of play in Qatar.

The 2020 season, which had been due to kick off this weekend at the Losail circuit that hosted that final test, looks set to offer Marquez his stiffest opposition, and his preparations have been fraught. Not only was the bike troubled, but he was gritting his teeth through injury. Off-season surgery was required on a partially dislocated shoulder sustained in a heavy crash during Malaysian Grand Prix qualifying last November. Marquez (right) went to the first test at Sepang at "70%" fitness, and the situation didn't improve much in the fortnight leading up to the Qatar test.

The fact that his likely main rivals — Yamaha riders Maverick Vinales and Fabio Quartararo, and Suzuki duo Alex Rins and Joan Mir — had hit the ground running with their new machines really did up the odds against Marquez as the pre-season came to an end.

In the latter half of 2019, rookie sensation Quartararo — on the 'B-spec' satellite Yamaha run in Petronas SRT colours — gave Marquez something to think about. Quartararo pushed the Honda rider hard at the San Marino and Thai GPs, forcing Marquez to dig as deep as he's ever needed to for victory. More significantly, Quartararo got into Marquez's head. After beating the Frenchman at Misano, Marquez admitted he'd known for some time that Quartararo would be a threat this season. He duly tried to psyche him out in qualifying at Sepang and it backfired in a big way — Quartararo, unintentionally, caused Marquez's winter of recovery.

With Quartararo now kitted out with full works Yamaha machinery ahead of his step up to the factory team in 2021, he's clearly a potential world-beater in the eyes of the Japanese marque. His one-lap speed (he qualified on pole six times last year) hasn't been in doubt, and he set the overall quickest time of the Sepang test. He was initially not quite as comfortable with the new M1, so his focus on setting himself up better for races has seen him concentrate more on long runs. On the final day of testing at Losail, a race simulation of largely mid-high 1m54s laps offered much encouragement.

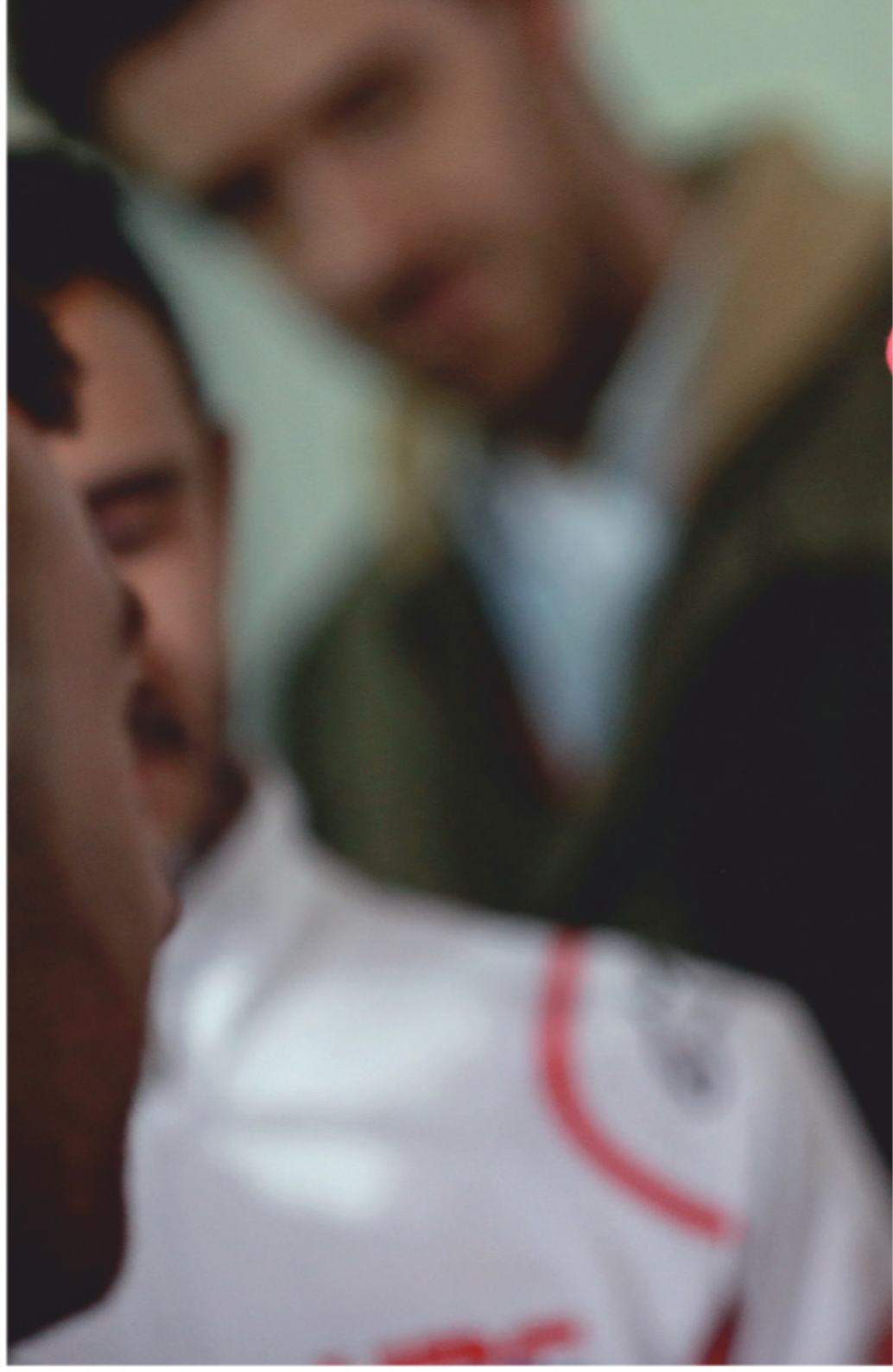
Yamaha may well be on to a double whammy in 2020, as Quartararo's future team-mate Vinales has caused dread to set in among some of the manufacturer's rivals, with numerous riders keen to point out throughout testing how strong he has been over long runs. Fastest overall at Losail — a track typically strong for Yamaha anyway —

"QUARTARARO IS CLEARLY A POTENTIAL WORLD-BEATER IN THE EYES OF YAMAHA"

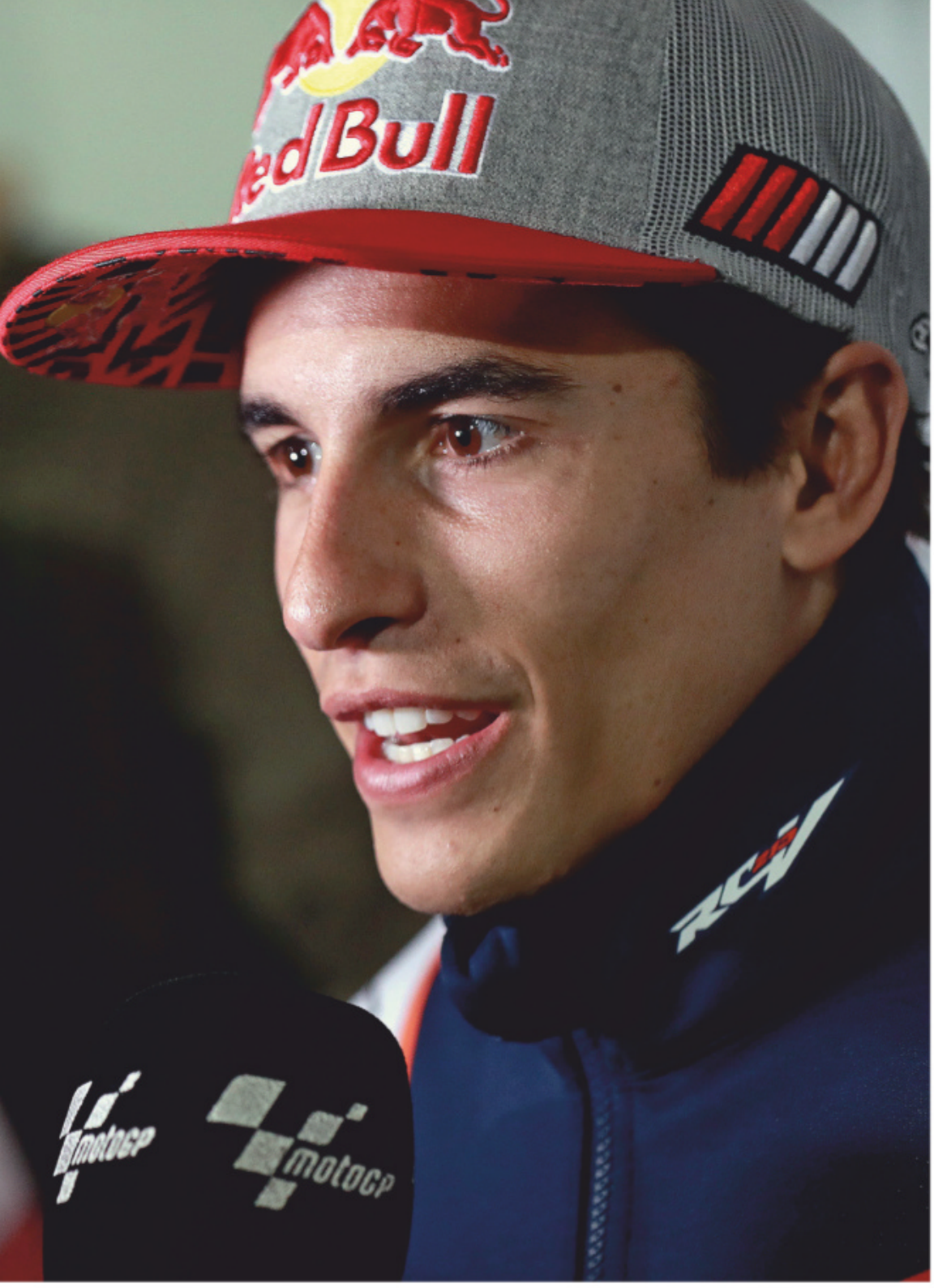
Vinales's biggest gain is in his approach. Yamaha's downward spiral through 2017 and 2018 often led Vinales to get too frustrated, but a calmer approach — helped greatly by new crew chief Esteban Garcia — last year yielded a more positive outlook. That has continued over the winter, the Spaniard visibly more content with life.

"I'm much more calm and without pressure," he said of how he's tackled the pre-season. "In previous years, I finished testing in Malaysia really angry, but this year I was like, 'OK, I think we got the job done, tried the bikes, clarified everything'. That's the most important thing."

Vinales's speed is in no doubt. His domination of the Sepang race last year proved how good he can be when he can get the Yamaha out front and ride the bike as it should be ridden. First laps have always been tricky for Vinales, but further work has been done to improve this. A key update has been Yamaha's 'holeshot device' (see right), »

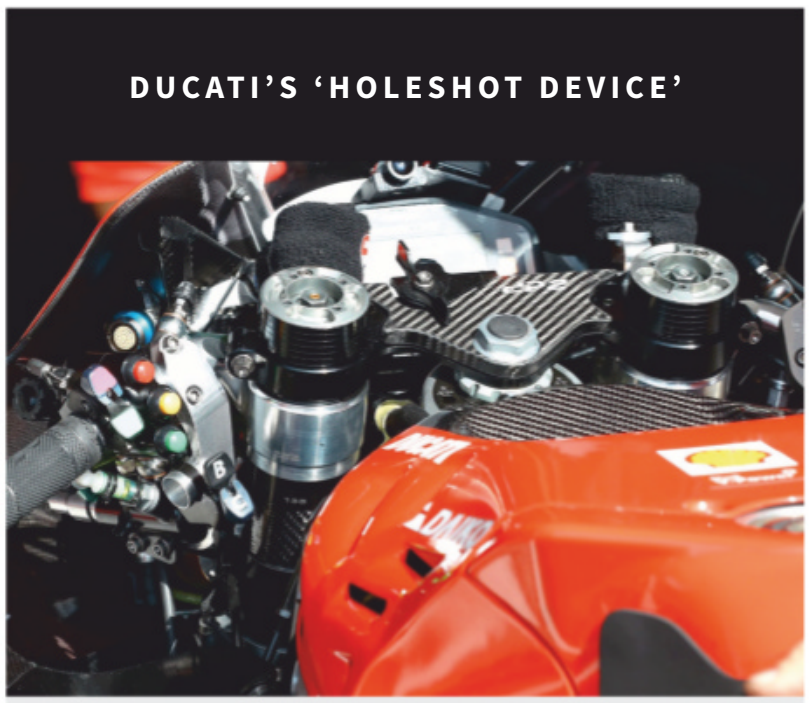








Quartararo's works Yamaha machinery strengthens his threat



DUCATI'S 'HOLESHOT DEVICE'

THE TECH WAR THAT STARTED WITH STARTS

Last year, Ducati set tongues wagging with its latest toy. The 'holeshot device' had first cropped up on Jack Miller's Pramac-run bike in the 2018 Japanese GP, but it wasn't until testing in 2019 that Ducati's secret was discovered.

The rear of the bike is mechanically lowered (electronically controlled suspension is outlawed) when the rider engages a switch on the grid. This leads to a better launch, as the lower centre of gravity keeps the front of the bike on the ground when the rider accelerates. The system disengages under braking for Turn 1.

The benefit for Ducati last year in reality was slight. It only won three times relative to the holeshot-less Marc Marquez's 12. Of the 11 races in which Andrea Dovizioso made up places off the line, he only transformed six into podiums. Both of his victories – in Qatar and Austria – also went down to the wire. Team-mate Danilo Petrucci actually lost places off the line before going on to take victory at Mugello.

Despite this, the rest have moved to copy Ducati. Yamaha introduced its version at the Sepang test, while Honda brought its to Qatar. It's unclear whether KTM has one, while Aprilia introduced its version in the middle of last season. Suzuki had hoped to test a device in Qatar, but confirmed it won't be ready for the first race.

"HAVING SOME CHANCE OF GETTING TO TURN 1 FIRST WILL BE A CRUCIAL BENEFIT FOR VINALES"

Yamaha and Maverick Vinales are likely to benefit most. Vinales's weakest point of recent years has been his starts, and the Yamaha's struggles in pack races mean recovering has been a massive task. So having some chance of getting to Turn 1 first will be a crucial benefit for Vinales, who is likely to be a force on the M1 this year.

But while the rest are now playing catch-up, Ducati has moved the game on. It's now able to adjust the rear rideheight on the fly, essentially acting like launch control out of each corner, and this is also likely to benefit tyre wear. Ducati has raced it since last October on Miller's bike.

With the already small advantage of the holeshot device likely to be nullified by its use throughout the field, Ducati has realised this and stolen a march on its rivals. If it puts in a stern early title challenge, expect a frantic scramble from its rivals to develop their versions.

which should give Vinales a boost off the line. Should he come out of Turn 1 not in the lead, he still believes the new M1 should be able to run better in head-to-heads, and a bit more power from the engine should keep him in play in the slipstream. While last year Quartararo was the man to take the fight to Marquez, arguably it's Vinales who has emerged as his strongest rival.

ROSSI RIDING INTO RETIREMENT?

With those two helming Yamaha's charge, the pressure is somewhat off Valentino Rossi. Whatever happens this year, he is out of the works Yamaha team at the end of the season. He couldn't commit to Yamaha before he knew if he could still be competitive in MotoGP; giving himself a timeframe of around eight races, Rossi simply needs to see if he can still hack it and if his enjoyment remains. Should that be the case, Yamaha has guaranteed him full support at a satellite team.

While happy with the overall feeling on the bike, and seemingly riding better than he has for some time, Rossi admitted after testing that he is worried. Michelin's new-for-2020 tyres are giving Yamaha and Suzuki better grip, and by design are meant to last longer and fade more gradually. But Rossi is still struggling with rear-tyre life over a race distance — a long-standing issue for Yamaha riders. Finding a cure for this won't be critical to him extending his career, but it may play a factor if he is continually unable to transform good pace into results.

Michelin's new tyres have also caused some issues for the works Ducati riders. Thrice a championship runner-up, Andrea Dovizioso looks solid on the GP20 and the machine looks to have reclaimed its honour as the fastest motorcycle. But the big gain he and Ducati truly needs to bridge the 151-point gap by which Marquez beat him last year doesn't appear to have been made. His long-run pace in the Qatar test certainly lacked compared to Yamaha and Suzuki. He is aware of this,

"THE THREAT TO MARQUEZ GREW STRONG LAST SEASON, AND HAS INTENSIFIED OVER THE WINTER"

and admits the race will be "very tough", but insists Ducati finished the Qatar test "in a better condition" than it started.

Ducati's charge, at this stage, looks more likely to be led by Pramac's Jack Miller. He has clicked with the GP20 and isn't suffering as much with the new tyres. With Ducati in need of a big signing after all its preferred options look to have been scooped up, a strong early season for Miller could see him handed a hefty offer from Bologna.

Suzuki has proved it can cut it at the front in MotoGP, and Rins's two victories last year showed he can handle the pressure. With the GSX-RR in a strong place — comparable to Yamaha at present — Suzuki could well be staring at a genuine title tilt for the first time in the modern era. That burden won't fall entirely to Rins, as Mir — coming into his sophomore year — has had a strong winter. Constantly there or thereabouts on long-run and single-lap pace, Mir will push Rins hard this year, which can only be a good thing for Suzuki.

HAVE HONDA AND MARQUEZ TURNED IT AROUND?

As the Qatar test rumbled on, it looked like Marquez and Honda would have to pull out something special to be a part of this top-half battle come the first race of the year.

But, just as hope crept in for the rest that Marquez might be in trouble, Honda threw all its might at the final day of testing to discover what was wrong with its bike. And discover it did.

Marquez had a 2019 bike at his disposal to compare with the 2020 machine, and also work out whether the problems stemmed from the bike itself or the new tyres. While he wouldn't go into specific details, it seems that Honda's issues revolved around its updated aerodynamic package. Numerous runs on the 2019 version for both Marquez and works-supported LCR rider Cal Crutchlow seemed to confirm this. The mood in the camp afterwards was one of relief.

Marquez isn't out the woods just yet. He's still below peak physical fitness, admitting that his injuries mean he feels more of the Honda issues compared to when he was able to ride around them so expertly last season on his way to a sixth world title. And, now that Honda seems to have found a way out of the hole it dug itself into, it has to reassess everything it has tested over the winter.

Honda's last-gasp revival will give the second Marquez, Moto2 world champion Alex, reason to be moderately cheerful. While the Sepang test was OK for him, the Honda's pitfalls hit him like a ton of bricks. Marquez Jr, admittedly, didn't try any of the solutions his brother or Crutchlow did, and he will certainly make a step forward once racing begins. But this won't make his rookie campaign any easier.

Despite the woes of winter, Marquez remains championship favourite. Time and again he has outridden the Honda's flaws to make everyone look silly. And it won't be the first time he comes into a season injured. But the threat to his MotoGP rule grew strong last season, and this has only intensified over the winter. So, while Marquez will remain hard to beat, so too will it remain tough for him to continue his dominance.

KTM AND APRILIA BRIDGING THE GAP

KTM's fourth season in the premier class looks set to be its biggest yet. The RC16 has taken another step forward over the winter, particularly in the corners, and packs a bit more of a punch in a straight line.

Rider Pol Espargaro believes KTM is in the same ballpark as the works Ducatis. "Yamaha and Suzuki are in the first group, I would say," he said. "But I think we are in the pack with the factory Ducatis. I think the other ones are a little bit slower in race pace. So I'm happy."

KTM's increase in involvement by offering works support to the Tech3 team has aided development, and has also led to it fielding a massive young talent in Miguel Oliveira. With Espargaro at the helm in its factory team, and a promising rookie in Brad Binder alongside, KTM has a formidable line-up on the race track. Consistent podium charges will be a tall order, but KTM now has a bike to capitalise when the opportunity arises, and in Espargaro it has a rider capable of mixing it with the frontrunners.

At Aprilia, it's Espargaro's big brother Aleix leading the charge. Aprilia has brought a completely redesigned RS-GP, and the steps forward have been immediate, with Espargaro Sr branding it the best RS-GP he'd ridden in his time with the manufacturer, even comparing it to the Forward Yamaha he rode to a podium in 2014.

A strong long run at the first test in Malaysia led Espargaro to boldly claim he could fight for the podium had the race been at Sepang that week. While the pace remained solid in Qatar, more technical issues cropped up with the bike — understandable, given it was only ready a fortnight before the opening test. This will be the biggest hill to climb for Aprilia this season, as the rest have been testing their 2020 prototypes since last summer.

And there's uncertainty off the track too for Aprilia. Espargaro's team-mate Andrea Iannone faces a ban after testing positive for an anabolic steroid last November at Sepang and failing a subsequent urine test. And even if he's cleared, it won't be all champagne and roses in the team garage, since comments he made about developing the bike greatly angered Espargaro. It looks like stepping into podium contention this year will be a big ask for this team.

It's clear that the RS-GP has made huge strides over the winter and can, judging by testing, be considered a genuinely competitive motorcycle. What Aprilia has to do throughout 2020 is ensure it continues to progress the RS-GP to justify its place in the elite class of motorcycle racing, and prime itself for its biggest step in 2021.

STOP PRESS The MotoGP season-opener in Qatar has been cancelled due to travel restrictions brought about by the coronavirus outbreak. The Moto2 and Moto3 races are still scheduled to take place because the teams and riders are already there for final pre-season testing. The Thailand Grand Prix, planned for 22 March, has also been postponed. The first round is now scheduled for Austin on 5 April.



Rins could be set to stage a genuine title tilt for Suzuki



Old warhorse Rossi enters the season on a suck-it-and-see basis

ENTRY LIST

NO	RIDER	TEAM
4	**Andrea Dovizioso**	Ducati
9	**Danilo Petrucci**	Ducati
5	**Johann Zarco**	Avintia Ducati
53	**Tito Rabat**	Avintia Ducati
12	**Maverick Vinales**	Yamaha
46	**Valentino Rossi**	Yamaha
20	**Fabio Quartararo**	Petronas Yamaha
21	**Franco Morbidelli**	Petronas Yamaha
27	**Iker Lecuona**	Tech3 KTM
88	**Miguel Oliveira**	Tech3 KTM
29	**Andrea Iannone**	Aprilia
41	**Aleix Espargaro**	Aprilia
30	**Takaaki Nakagami**	LCR Honda
35	**Cal Crutchlow**	LCR Honda
33	**Brad Binder**	KTM
44	**Pol Espargaro**	KTM
36	**Joan Mir**	Suzuki
42	**Alex Rins**	Suzuki
43	**Jack Miller**	Pramac Ducati
63	**Francesco Bagnaia**	Pramac Ducati
73	**Alex Marquez**	Honda
93	**Marc Marquez**	Honda

CALENDAR (ORIGINAL)

DATE	VENUE
8 March	Losail (QAT)
22 March	Buriram (THA)
5 April	Austin (USA)
19 April	Rio Hondo (ARG)
3 May	Jerez (ESP)
17 May	Le Mans (FRA)
31 May	Mugello (ITA)
7 June	Barcelona (ESP)
21 June	Sachsenring (DEU)
28 June	Assen (NLD)
12 July	KymiRing (FIN)
9 August	Brno (CZE)
16 August	Red Bull Ring (AUT)
30 August	Silverstone (GBR)
13 September	Misano (ITA)
4 October	Motorland Aragon (ESP)
18 October	Motegi (JPN)
25 October	Phillip Island (AUS)
1 November	Sepang (MYS)
15 November	Valencia (ESP)

RACE CENTRE

FORMULA E MARRAKECH • WORLD OF SPORT



Felix da Costa's win, by a margin of 11.4s, puts him 11 points clear at the top of the table

S BLOXHAM

DA COSTA AND VERGNE FINALLY SHOW TECHEETAH'S STRENGTH

The DS Techeetah team had shown good race pace all season but not quite put together a weekend to make the most of it, until Morocco

MATT KEW

PHOTOGRAPHY motorsport IMAGES





S BLOXHAM

The warning signs from DS Techeetah to the rest of the Formula E grid have been plentiful this season, not least thanks to the team's blistering race pace. But amid multiple spoiled laps in qualifying and its drivers tripping over one another on track, there's been a wait to see just how potent those black-and-gold cars truly are. Antonio Felix da Costa ended that delay in some style in Marrakech last weekend as he scored the third most dominant win in the championship's history.

Da Costa had cut an unhappy figure after netting second place in Santiago in January. A subdued qualifying had left him 10th on the grid and he was then delayed in the race by team-mate Jean-Eric Vergne, who was trying to shed damaged bodywork. More painfully, he was fed misinformation about car status over the radio while battling Maximilian Guenther for the spoils. Da Costa led onto the last lap but faced critical battery temperature issues. Only 0.1 degree away from his machine shutting down, he had to slow to a crawl and concede the win.

He finished runner-up once more in Mexico City a month later. A marginally better qualifying performance — aided by a penalty for Pascal Wehrlein — ranked him ninth, but again he and Vergne were slow to work together on track. Twice they swapped position and, although da Costa played down the cumbersome team orders after the race, the fact is he and Vergne lost two seconds to Sebastien Buemi ahead as they chopped and changed.

In Marrakech, however, da Costa and DS Techeetah stitched it all together. The ex-BMW driver had blamed his qualifying troubles on unfamiliarity with the car. With each passing race, that's resolved more and more. He topped group one qualifying and ended the stages fourth fastest overall — no small feat on a dusty and green circuit — to progress through to superpole. Da Costa posted a fine benchmark and then profited from Andre Lotterer's minor slide under braking into Turn 1 and scruffy Turn 5, combined with Guenther's sizeable Turn 11 lock-up, to snare pole.

A blinding getaway was flattered further by Guenther's sluggish launch, and da Costa duly led into the sweeping left-handed first corner. A near 0.9s advantage at the end of the opening tour appeared safe enough. Over the next 12 laps, however, he barely doubled it as opposed to romping into the distance.

Guenther was on the pace, but that he remained within touching distance of da Costa through the race's opening third was more down to the leader's supreme management. So much so, suddenly da Costa allowed his margin to be slashed. He then appeared to slow across the line and Guenther zipped past into first. A problem



Da Costa got a good start and controlled the race to the end

hadn't manifested itself, no – to preserve his useable energy, da Costa wanted to play a cycling-style game of team pursuit and let the BMW driver set the pace and cut the hole in the air.

"I had to be very brave and clever when making any moves," da Costa said. "At one point, I had to let Max get really close and push him into using extra energy."

Five laps watching the rear of Guenther's car snake through the 12-corner circuit was enough for da Costa. He deployed his 250kW attack mode and was set to relieve Guenther of the lead. With more available power, he cruised by on the long run to Turn 11 on lap 20 of 34. And that was it as far as the Portuguese was concerned. There would be no more games, no more swapping positions to conserve energy. From there on, da Costa would stamp his authority on the race.

An 11.4s triumph was enormous, if generous thanks to Guenther's late battle with Vergne that allowed da Costa to streak clear. Only Putrajaya in 2015, when Lucas di Grassi won over Sam Bird by 13.9s, and Bird's 11.6s 2017 triumph over Vergne in Hong Kong have been more crushing.

"To be honest, it's all down to a great team," da Costa added. "The car was quick from the word go when we got here. I was able to put it on pole, which I was really, really happy with. The race was actually a bit more complicated than it looked. We had to play a »

MERCEDES DECLINE


Toto Wolff and team chief Ian James in discussion

STALEY

The big boss was present in Marrakech, so Mercedes could have done with arresting its declining results. Toto Wolff, head of motorsport for the marque, watched Stoffel Vandoorne vanish and Nyck de Vries give up a potential podium three corners into the E-Prix.

After a brace of top-three finishes in the opening two races of the season, results have slipped ever worse for the Silver Arrows. Granted, Vandoorne led the points heading into Mexico City, but a penultimate-lap shunt there marked a double retirement for the team.

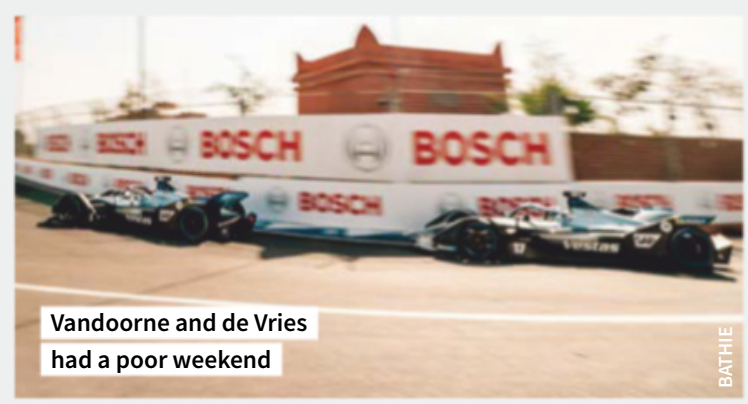
But rather than bounce back, last weekend Vandoorne repeated a worrying trend occasionally seen during his two seasons at McLaren in Formula 1. He was well off the pace, ill at ease with the car, and he couldn't explain why.

"To be honest, it was probably one of the lowest weekends [in FE]," Vandoorne said. "It's very strange because it's kind of my first weekend where I had no pace for one lap."

It stemmed from a lack of confidence with the brakes during free practice, but a change of material didn't give him a shot in the arm. He started on row nine and was 15th at the flag, upstaged by team-mate de Vries.

That said, there was yet another operational error for de Vries – for exceeding regeneration power under braking at Turn 3 on the opening lap – earning him a drivethrough penalty. Having started fourth, de Vries served the penalty and dropped to three seconds behind last-placed runner Ma Qinghua. He did recover to 11th and cruised past Vandoorne, but it was ultimately a point-less result. The reigning F2 champion rightly felt aggrieved to miss out on what might have been his first top-three finish.

"I have nothing against the penalty itself," he said. "I just think it's a shame that we are continuously making little mistakes that are keeping us away from the battle. If you look at the race pace, then I'm completely certain that P2 was definitely there."



Vandoorne and de Vries had a poor weekend

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Lotterer held third for Porsche until lap 21 but dropped back to eighth

ROMNEY

little bit of a strategic hand in there, but I'm super-happy.

"The good thing is the team comes back and they know where to improve and they know where to work. There's no pressure, everyone's relaxed and everyone just naturally wants to win. It's naturally a good environment in the team and when you do things while having fun at the same time, the results come out."

The Marrakech E-Prix last season ended in disaster for da Costa. Again, he'd been the long-time leader around the Circuit Moulay el Hassan but suffered a calamitous retirement six laps from the end when he collided with chasing BMW team-mate Alexander Sims. One year on, he achieved redemption.

"I was thinking about that [crash] when I was coming in," da Costa said. "I wanted revenge. To be honest, on those last three laps I had a little bit of a gap and kept looking at that wall into Turn 7 and was like, 'No thank you, not this time.'"

An alternative headline to da Costa's domination is that he became the ninth different winner in as many races. While there is some solace to be found in the way the competitive order in



ROMNEY

Vergne battled through flu to finish in third



FE shifts around so often, this feels more akin to him and DS Techeetah asserting its mark on the season.

A third series victory – each with a different team – takes da Costa to the top of the standings and 11 points clear of pre-event leader Mitch Evans. Meanwhile, a first win of the season for the squad, combined with Vergne sealing a double podium in third, means DS Techeetah sits eight points pretty in the constructors' battle.

For the chasing pack – led by Jaguar and BMW – there's ample reason to be just as worried by Vergne's third place, which was arguably the drive of the weekend.

This season, the Marrakech race start time was brought forward by an hour. Had FE stuck to its usual one-day format, it would have meant opening practice taking place in low-light conditions. To avoid this, running spilled over to Friday afternoon but that meant Vergne could not participate. He was busy being assessed in hospital – including tests for coronavirus – after he was knocked sideways by flu.

"I was kept in a quarantine in hospital in Marrakech," the reigning champion said. "I can let you imagine how my day was. I was feeling a little bit better [than Thursday] but I was in a five-square-metre bedroom. It was very, very hard and then for the last three days I had a 40-degree fever, so I was not at my best."

James Rossiter, formerly a Nissan racer in Super GT and currently the DS Techeetah team's test driver, was granted a last-minute e-licence to participate in first practice. In turn, that made him ineligible for Sunday's rookie test, requiring four-time Le Mans 24 Hours class winner Nicolas Lapierre to jump on a late flight across the Mediterranean.

Vergne worked with FIA medical staff to return to the circuit on Saturday, but he was clearly struggling. He sounded hoarse, kept bursting into coughing fits and was all-round sheepish. Added to that, he was 45 minutes short on track experience compared to everyone else. Again unhappy with the car's brakes in qualifying, he lined up 11th for the race. »





Evans, here leading Turvey, climbed to sixth after starting last on the grid

S BLOXHAM

He received some good fortune on the opening lap as Sims was squeezed by Oliver Rowland into Turn 1, which delayed the pair and promoted Vergne to ninth. James Calado was soon dispatched, and Vergne continued his rise through the field.

The ongoing pattern of Porsche suffering a loss of race performance meant Lotterer conceded third on lap 21 of 34. Activating his second attack mode allowed Vergne to shred the deficit to Guenther and bring himself into contention for second.

The pair then engaged, but a half-baked defensive move into Turn 11 from Guenther didn't keep the charging DS Techeetah behind. Vergne had plenty of room to make his manoeuvre stick. When the roles were reversed, Vergne didn't show the same etiquette. With the BMW enjoying a strong run down the main straight, Vergne darted to the inside to block the pass. He closed the door at such a rate that Guenther was forced to lock all four wheels trying to avoid a collision.

In this moment, Guenther looked to have gained some inspiration. Having seen how decisive Vergne was in defence, Guenther sold the double series champion a dummy into Turn 11. Vergne responded rapidly once more and moved over, and in turn he opened the whole of the outside lane for the BMW to slide right through. Guenther cut back across the track and carried on round for second.

But forget that he'd lost the place within the dying moments. Given how ill Vergne had been, a first podium since Bern last year was a tremendous result that again highlights that even an under-the-weather double champion can extract scintillating race pace from the DS Techeetah.

"At the end I had a good fight with Max, but I was sure that he was going to pass me," Vergne said. "I could not fight with the energy I had left. He could have passed on the outside or the inside, so that's why I went down the middle thinking that maybe he didn't know where I would go."

Vergne labelled it his toughest weekend in FE. Evans wasn't too shy of that, either. A calamitous strategy error from Jaguar meant the Mexico City victor didn't get to post a qualifying time. He left the pits late on in group one to start a shorter two-lap run but was too slow through the final sector. That meant he was 0.268s too late crossing the line to start a flier and would start the race plum last. What's worse is that he had continued round to set an invalidated lap of 1m17.4s, which would have put him top of the pile for the pre-superpole stages.

Evans was rightly "furious", but channelled that anger in the best possible way during the race. He wasn't far off climbing a position every two laps. In a contest that featured no safety-car interludes and only one last-lap yellow flag, it was an astonishing recovery to sixth. As driver and team stated, there was no magic bullet to the meteoric and metronomic rise. Rather, a fine driver was fighting to recover the lost ground in the championship battle while driving what appears to be the second quickest race car this season.

The satisfaction for Evans was clear. "I know today could have been either a win or a P2," he said. "It was about damage limitation [after qualifying], but in terms of executing the race, it was probably on par with [winning in] Mexico."

Jaguar obviously walked away from qualifying with its tail between its legs. It had been a grave mistake, but such a high-profile error will be unlikely to recur. After software issues denied Evans a Santiago victory, the team rigorously analysed the data prior to Mexico, found a fix and delivered a win. That process will be repeated and the lessons will be learned.

As such, Evans will almost certainly be a title threat heading into the final races in London. But the long and short of it is this: if you want to assemble a fantasy FE team just now, you'd probably have Mark Preston at the helm with his McLaren, Arrows and Super Aguri F1 experience. You'd be hard-pressed to find a stronger driver combination than da Costa and Vergne. Above all, you'd pick the E-Tense FE20 as the car of choice. Ominously, DS Techeetah already has all of those assets in place.

On that basis, as long as its drivers can be managed when they meet on track in future, this team may well come to be measured as the FE yardstick.



Jaguar team qualifying error possibly cost Evans the pole

S BLOXHAM

IN THE HEADLINES

PENALTY FOR FRIJNS

Virgin Audi driver Robin Frijns reckoned the deletion of his qualifying lap, due to a breach of throttle map settings, was "utter bullshit". He and the team maintained that tagging the wall on his flying lap caused the glitch, whereas the FIA insisted it happened moments prior. It meant Frijns started 22nd, but he did recover 10 places to finish 12th.

CALADO SWITCHES ISSUES

Qualifying has been James Calado's Achilles' heel so far – 17th last time out in Mexico City had been his best. He improved emphatically in Morocco with 10th, despite a "conservative, 95% lap". But it came at the cost of his solid race pace. An eventual drop to 16th – as Jaguar team-mate Mitch Evans stormed from last to sixth – was blamed on a loss of balance.

NIO WOE

A new team principal and executive director didn't boost the NIO 333 squad. Ma Qinghua, under threat for his seat, was handed a drivethrough penalty for a jump start and finished a lap down in 23rd – last of the finishers. Team-mate Oliver Turvey was 21st after also serving a drivethrough, this time for not meeting the new homologated throttle pedal map regulation.

JOURNO SNAFU

There was an unfortunate Formula E first on the morning of the post-race rookie test when a journalist – who is in no way affiliated with Autosport – crashed the Gen2 demo car during a media drive. A shunt broke the front wing and caused damage totaling an estimated five figures. All other scheduled media runs were cancelled.

BIRD RAGE

Sam Bird (below) scored a podium in every one of the three Marrakech E-Prix prior to last weekend, but the hot streak ended as he scraped a sole point in 10th. He joined team-mate Frijns by giving a colourful description of his race. Being "in the shit" when other drivers wouldn't let him pass and "getting shafted" in the first attack mode phase preceded a slow puncture.


ROMNEY


Da Costa celebrates his win and lead in the championship

ROMNEY

RESULTS ROUND 4/11, MARRAKECH (MAR), 29 FEBRUARY (34 LAPS – 62.704 MILES)

POS	DRIVER	TEAM/CAR	TIME
1	**Antonio Felix da Costa** (PRT)	DS Techeetah / DS E-Tense FE20	46m52.757s
2	**Maximilian Guenther** (DEU)	BMW / BMW iFE.20	+11.427s
3	**Jean-Eric Vergne** (FRA)	DS Techeetah / DS E-Tense FE20	+12.034s
4	**Sebastien Buemi** (CHE)	Nissan e.Dams / Nissan IM02	+12.282s
5	**Edoardo Mortara** (ITA)	Venturi / Mercedes EQ Silver Arrow 01	+15.657s
6	**Mitch Evans** (NZL)	Jaguar / Jaguar I-type 4	+16.335s
7	**Lucas di Grassi** (BRA)	Audi Sport Abt / Audi e-tron FE06	+18.706s
8	**Andre Lotterer** (DEU)	Porsche / Porsche 99X Electric	+19.498s
9	**Oliver Rowland** (GBR)	Nissan e.Dams / Nissan IM02	+20.126s
10	**Sam Bird** (GBR)	Virgin Racing / Audi e-tron FE06	+20.295s
11	**Nyck de Vries** (NLD)	Mercedes / Mercedes EQ Silver Arrow 01	+20.557s
12	**Robin Frijns** (NLD)	Virgin Racing / Audi e-tron FE06	+22.373s
13	**Jerome d'Ambrosio** (BEL)	Mahindra Racing / Mahindra M6Electro	+22.785s
14	**Daniel Abt** (DEU)	Audi Sport Abt / Audi e-tron FE06	+25.080s
15	**Stoffel Vandoorne** (BEL)	Mercedes / Mercedes EQ Silver Arrow 01	+25.969s
16	**James Calado** (GBR)	Jaguar / Jaguar I-type 4	+26.528s
17	**Felipe Massa** (BRA)	Venturi / Mercedes EQ Silver Arrow 01	+27.486s
18	**Neel Jani** (CHE)	Porsche / Porsche 99X Electric	+44.476s
19	**Brendon Hartley** (NZL)	Dragon Racing / Penske EV-4	+49.002s
20	**Nico Muller** (CHE)	Dragon Racing / Penske EV-4	+53.075s
21	**Oliver Turvey** (GBR)	NIO / NIO FE-005	+59.969s
22	**Pascal Wehrlein** (DEU)	Mahindra Racing / Mahindra M6Electro	+1m13.414s
23	**Ma Qinghua** (CHN)	NIO / NIO FE-005	-1 lap
R	**Alexander Sims** (GBR)	BMW / BMW iFE.20	33 laps-accident damage

Winner's average speed 80.254mph. **Fastest lap** **Wehrlein** 1m20.345s, 82.717mph.

SUPERPOLE **1 da Costa 1m17.158s**; 2 **Guenther** 1m17.227s; 3 **Lotterer** 1m17.253s; 4 **de Vries** 1m17.590s; 5 **Mortara** 1m17.803s; 6 **Buemi** 1m17.811s.

QUALIFYING **Guenther 1m17.562s**; **Lotterer** 1m17.582s; **Mortara** 1m17.631s; **da Costa** 1m17.640s; **de Vries** 1m17.743s; **Buemi** 1m17.779s; 7 **d'Ambrosio** 1m17.798s; 8 **Sims** 1m17.830s; 9 **Rowland** 1m17.839s; 10 **Calado** 1m17.867s; 11 **Vergne** 1m17.928s; 12 **Hartley** 1m17.944s; 13 di **Grassi** 1m17.958s; 14 **Bird** 1m18.064s; 15 **Wehrlein** 1m18.069s; 16 **Muller** 1m18.203s; 17 **Vandoorne** 1m18.218s; 18 **Abt** 1m18.229s; 19 **Turvey** 1m18.313s; 20 **Massa** 1m18.675s; 21 **Ma** 1m19.359s; 22 **Frijns** 1m27.444s; 23 **Jani** 1m32.690s; 24 **Evans** no time.

CHAMPIONSHIP **1 da Costa 67**; 2 **Evans** 56; 3 **Sims** 46; 4 **Guenther** 44; 5 **di Grassi** 38; 6 **Vandoorne** 38; 7 **Mortara** 32; 8 **Vergne** 31; 9 **Rowland** 30; 10 **Bird** 29.

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Bowman (88) was in the mix throughout and took his second Cup win

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Bowman hits his target for Hendrick in California

NASCAR CUP
FONTANA (USA)
1 MARCH
ROUND 3/36

Alex Bowman took the second NASCAR Cup victory of his career at Fontana — a venue where the Hendrick Motorsports Chevrolet driver previously hadn't finished in the top 10 — to add to his maiden win at Chicagoland in 2019.

Drizzle surrounded the cold Californian speedway pre-race, but the initially tricky conditions did not lead to a race of attrition.

Bowman won the first stage, was runner-up in the second, and was cruising out in front after a lengthy duel with the Ford of Team Penske's Ryan Blaney, who had been victorious in the second stage after starting mid-pack.

The scrap for the spoils in the opening stage was fought out between Bowman, Blaney, polesitter Clint Bowyer and Jimmie Johnson. Bowyer dropped back later on and a cut tyre in the second stage compounded his woes to bring out the only non-stage-related caution. Meanwhile, Johnson struggled to keep up with the frontrunners on his way to seventh.

Martin Truex Jr once again showed the pace of the Joe Gibbs Racing Toyota. He had to start 38th after failing pre-qualifying inspection multiple times, but carved his way up into the mid-pack early on. By the time the final restart came on lap 127 of 200, Truex was well in the mix. That was until a wheel-gun issue during the last green-flag pitstop sequence dropped him out of contention. He eventually finished 14th.



Truex was fast but lost time with a bad pitstop

That left Blaney and Bowman at the head of the field — separated by five seconds — until Blaney too suffered misfortune as a cut tyre with three laps to go meant the pre-event points leader finished a lowly 19th.

Bowman's winning gap to reigning NASCAR Cup champion Kyle Busch was 8.904s. Busch too had worked his way up from mid-pack, but his JGR Toyota lacked the overall competitiveness of Bowman, Blaney and Truex. Kurt Busch rounded out the top three, despite a pit mishap of his own when he missed his pitbox between the first and second stages.

In addition to the small number of caution periods, this race only featured one retirement: Christopher Bell suffered an engine issue on lap 80.

WEEKEND WINNERS

NASCAR CUP
FONTANA (USA)
Alex Bowman
Hendrick Motorsports (Chevrolet Camaro)

NASCAR XFINITY SERIES
FONTANA (USA)
Harrison Burton
Joe Gibbs Racing (Toyota Supra)

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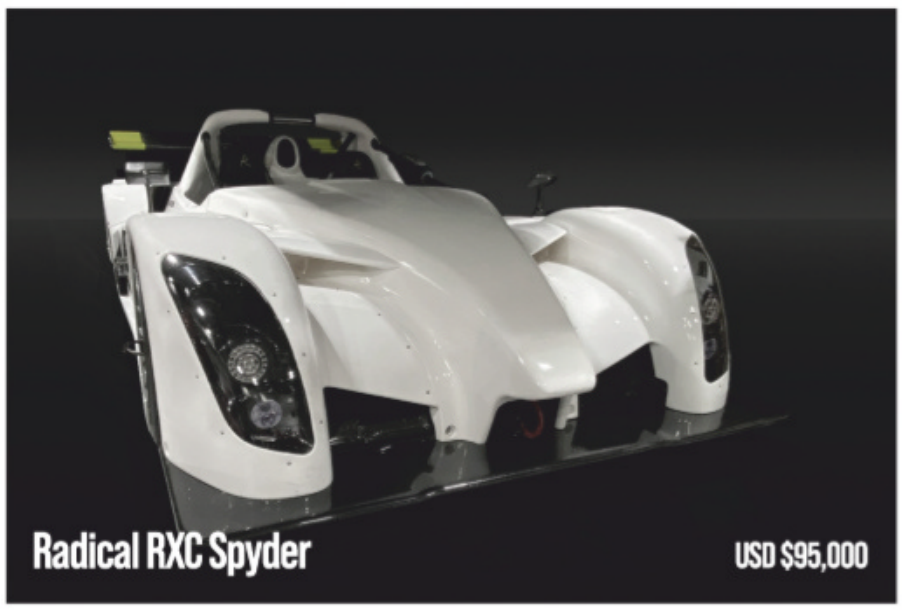
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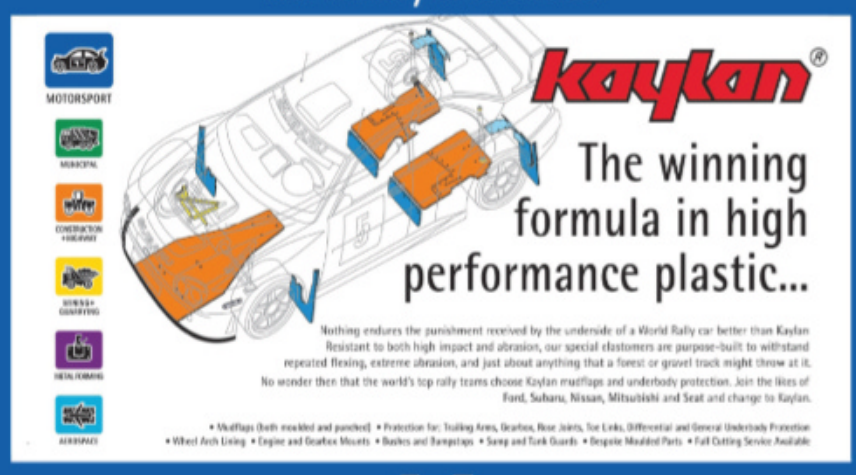
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GT CHAMPS DAVIDSON AND ADAM SPLIT UP FOR 2020

BRITISH GT

Reigning British GT champions Jonny Adam and Graham Davidson will stay at TF Sport in a bid to take another title this year, but will be in different cars.

Aston Martin works driver and four-time series champion Adam will reprise his partnership with series returnee Ahmad Al Harthy, with whom he won the Blancpain Endurance Series Pro-Am Cup in 2017. Davidson, meanwhile, will share the sister Aston Martin Vantage GT3 with reigning GT4 champion Tom Canning.

The cars will be entered under the Oman Racing with TF Sport banner in deference to 38-year-old Al Harthy's personal sponsorship.

Al Harthy, who added a second Blancpain Endurance Pro-Am title last year with TF Sport, was a British championship regular from 2013-15 with Motorbase and finished runner-up in 2014 in the previous-generation Vantage.

He replaces Mark Farmer, who has stepped back from the series after a confidence-sapping season in which he struggled to get to grips with the new-for-2019 Vantage GT3, and only managed a single podium after challenging for the 2018 title.

Team boss Tom Ferrier told Autosport: "They've all been with us before, they're all champions in their own right in the different disciplines they've done with us, so for sure both cars will be strong. The aim is to finish 1-2 in everything we can."

Davidson, who with Adam fought back from a 56-point deficit with four races remaining to claim the 2019 title, told Autosport that he is confident of taking another title in his second season with the team alongside GT3 rookie Canning, the winner of the 2019 Aston Martin Racing Driver Academy.

"Having won it in very difficult circumstances and overturning the huge points deficit, I believe that with a better start to the season, knowing the car, knowing the team, that I would stand a stronger chance of winning it second time around than I did last year," said Davidson.

"The only variable this time around is Tom and as far as I'm concerned he has proven himself in GT4 and, as part of the Driver Academy, Aston picked him out of 22 other drivers, which says a lot in itself."

JAMES NEWBOLD

P65 OPINION

Caroline lands TF Sport Aston GT4 drive

BRITISH GT



2018 McLaren Autosport BRDC Award finalist and 2017 British Formula 4 champion Jamie Caroline will compete in British GT with TF Sport this season.

The 21-year-old will race an Aston Martin Vantage GT4 alongside Porsche Carrera Cup GB graduate Daniel Vaughan for the squad, whose drivers won the GT3 and GT4 titles last year.

Caroline made his British GT debut with HHC in a McLaren 570S GT4 at Brands Hatch last year but crashed out of the race. It was his only outing during 2019 after struggling for budget, having competed part-time in BRDC British F3 with Carlin the year before.

"GTs are a better opportunity because you get rewarded for your results, whether that's a subsidy on your next season or a contract with a manufacturer, but that wasn't the case in single-seaters," said Caroline at the GT media day on Tuesday.

"Yesterday [Monday] was my first day in the car – it's very different to the McLaren in good ways. The McLaren was good in a straight line but the Aston Martin is more of an all-round car.

"You have to be reserved, you have to drive at 90% rather than 110% [as in a single-seater]. It's a case of changing my driving style, but I'm in the best place to learn.

"There's no excuse [not to aim for the title] – the team have proven they can do the job so 100% it's on me."

STEFAN MACKLEY



Double champion had originally targeted Europe

Howard to race in Britain after all

BRITISH GT

Two-time British GT champion Andrew Howard will compete in the championship this season after all, despite initially saying his racing programme would be focused in Europe.

The Beechdean team owner, who was champion in 2013 and 2015, will partner Ross Gunn in one of the team's Aston Martin GT3s.

"I had planned not to race in British GT but it's been a difficult close season," said Howard, who forms a Pro-Am pairing with Gunn. "I don't know what it's been like for other teams, but from our perspective there's been a lot of uncertainty. My programme was always going to be the last to be decided – we sat down 10 days ago and decided what was the best level for me to race. We just found that [me doing British GT] was the best way to support the Silver-Silver car [the sister Aston that will be raced by Valentin Hasse-Clot and Jack Mitchell].

"I think British GT is going to be hyper-competitive this year."

Beechdean will expand to running two GT3 cars this season, after operating an Aston Martin in GT4 last year, with which Kelvin Fletcher and Martin Plowman won the Pro-Am title.

STEFAN MACKLEY

IN THE HEADLINES

GT3 OUTNUMBERS GT4

GT3 entries in British GT will outnumber GT4 for the first time in six years this season. There are due to be 19 full-season GT3 entries in 2020, compared to 16 for the GT4 class. Among the 19, there are four each from Aston Martin, Lamborghini and Mercedes, along with three McLarens, two Bentleys and one Porsche. The 19th entry is yet to be confirmed but is due to feature a different manufacturer.

OPTIMUM'S GT4 DRIVERS

Optimum Motorsport has announced its GT4 driver line-up for this season's British GT campaign, as it switches from Aston Martin to McLaren machinery. In one car, the team will run former British Touring Car racer James Pickford alongside amateur driver Nick Moss. The other car will be driven by Asian Le Mans Series driver Ollie Millroy and American Brendan Iribe.

TOLMAN PAIRINGS UNVEILED

Tolman Motorsport has revealed the driver pairings for its two British GT4 entries that feature McLaren Driver Development Programme members. The two drivers with past experience of racing in British series, Ginetta GT5 Challenge driver Katie Milner and former British F3/F4 racer Harry Hayek, will share one car. The other will feature ADAC GT4 drivers Alain Valente and Michael Benyahia.

JMH TWEAKS ITS LINE-UP

The JMH Auto squad has revealed a revised line-up for its Lamborghini Huracan GT3 (below) in British GT this year. Instead of GT Cup driver John Seale being joined by Jamie Stanley, Seale will now share the car with GT regulars Jordan Witt and Adam Hatfield. Hatfield will drive at Snetterton and Silverstone, while Witt will complete the rest of the year. Hatfield said: "The calibre of the championship looks very high for this year, so hopefully, after a few days in the car, I can be right on the pace."



Tributes to Porsche club racer Lowry



VALENTINE

CALM ALL PORSCHE TROPHY

Tributes have been paid to club racer Ryan Lowry, who was tragically killed in Manchester last week.

Lowry, 36, was a co-founder of the CALM All Porsche series that aims to raise awareness for the Campaign Against Living Miserably charity.

He started racing in Classic Stock Hatch in 2012, driving a Ford Fiesta XR2i, before campaigning a Porsche 924 in the British Racing & Sports Car Club's Porsche Championship. Lowry finished third in the 924 class standings in 2017.

Lowry later began helping to organise races alongside fellow Porsche competitor Philip Waters, including a 25th-anniversary 924 celebration contest, before they worked to create the CALM series. The duo became close friends and Waters says Lowry is going to be "sorely missed".

"I first met Ryan in 2012 when he was racing at Brands Hatch as a friend of mine was looking after his car," said Waters. "I went along and met him and we got on really well. He was 36 and I'm 67 and we were quite different – I couldn't be more southern and he couldn't be more northern – but we got on really well and he was wise beyond his years.

"We started a championship last season for four-cylinder Porsches and Ryan's involvement was on the social-media side – without Ryan's input we just wouldn't have been able to do what we've done. We're all in shock. I used to speak to him two, three, four times a day – we messaged all the time. Together we were a great team and we bounced ideas off each other.

"You put him in a race car and he was a tiger – I was his team-mate but we never touched each other once.

"On a personal side, he and his wife Michelle fostered children. It's just typical of him – everything about him was caring and sharing."

Waters added he had plans to dedicate the first CALM Porsche race of 2020 to Lowry's memory and the category's 'best mate trophy' – for someone who goes 'beyond the call of duty' – will be renamed 'Ryan's award'.

STEPHEN LICKORISH

Kent in bid to finally land TCR UK crown this year

TCR UK

TCR UK runner-up Lewis Kent will return for a third campaign in the championship this year, after narrowly missing out on the title last season.

Kent will continue in the Hyundai i30 N TCR run by his family team, Essex and Kent Motorsport, and is also planning a programme of European events.

"If we don't come away with first place I think we're all going to be very disappointed this year," said Kent, who was second in the 2019 standings behind James Turkington. "We know we've got the pace."

Kent plans to contest the opening round of TCR Europe at Spa, which falls between the Silverstone and Croft UK events, with further outings dependent on logistics and budget. The more I'm in the car, the more I'm racing against higher [standard] drivers, the better," added Kent.

Essex and Kent Motorsport is gauging interest in running a second Hyundai, the car which has taken World Touring Car Cup drivers' titles in each of the past two seasons, alongside Kent's.

Also committing to TCR UK this year are British Touring Car Championship squads Trade Price Cars Racing and Power Maxed Racing, which are joining forces to field two Cupras. Trade Price Cars boss Dan Kirby will drive one of them.

MARK PAULSON



Hyundai driver is back for a third TCR season

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Dempsey had originally targeted USF2000 drive

Hayes winner Dempsey tests British F3 car with Dittmann

BRDC BRITISH F3

Walter Hayes Trophy winner and 2018 Chinese Formula 4 champion Jordan Dempsey tested with Chris Dittmann Racing at this week's BRDC British Formula 3 Championship media day and is now hoping to compete in the series.

Dempsey, who took two podium finishes in Asian F3 last season before his Hayes success, had planned to race in USF2000 in 2020 but has decided to focus his attention elsewhere.

"The problem with USF2000 is the season starts in about two weeks' time and all the seats are nearly gone," he said. "I've been looking at different championships and one of them was British F3 — I've been talking with Chris Dittmann.

"It's very different to the Asia car where the halo adds nearly 100kg, so the weight requires a different driving style to this car so it's easier to stop and accelerate.

"I would love to do this championship. With British F3, if you go out and do well, everyone knows what prestige this championship has."

CDR has confirmed British F4 race winner Josh Skelton will join the team this season in British F3. Elsewhere, Kaylen Frederick will spend a second season with Carlin, with which he took two wins in 2019, and Christian Olsen has joined Fortec Motorsport after racing in the 2019 European Le Mans Series and Le Mans Cup.

STEFAN MACKLEY

Jones and Miracco back to Ginettas

GINETTA GT4 SUPERCUP

Ginetta GT4 Supercup frontrunners Declan Jones and Carlito Miracco are set to contest full seasons in the series this year.

Jones has competed in the series on and off since 2014, taking two wins and a best result of fourth in the standings in 2017. After making a one-off outing at Oulton Park last year, he will be back full-time this season driving for Rob Boston Racing.

"I haven't raced full-time since my 2017 season, so it's brilliant to be back with who I feel are the best team on the grid in Rob Boston Racing," said Jones.

Miracco, meanwhile, became a regular podium finisher in his rookie GT4 Supercup season last year. He finished fifth in the standings, running as a privateer, and will now race with the Preptech UK squad.

"It was a last-minute deal to join the championship last year, just a week before the second round at Donington Park so, while the year wasn't by any means perfect, considering it was just my family and a few friends in a little pop-up awning, I think we did pretty well," he said.

IN THE HEADLINES

FROM RALLYCROSS TO F1000

British Rallycross Championship driver Nikita Abramov will move into circuit racing this year, competing in the F1000 single-seater championship. The Russian, who was fifth in the Swift Sport class of BRX last year, has previously contested rallies in his home country. He will race in F1000 with Team Sellars.

GRONKOWSKI'S FUNDRAISER

Scottish Formula Ford 1600 champion Jordan Gronkowski has launched a unique fundraising campaign in order to secure his place on the grid for his title defence, after suffering an engine failure in testing. He has started a donation-based prize draw called #LateBreaking for spectators to pitch in £1 each to help out. Prizes include a behind-the-scenes tour of the SMRC paddock with accommodation as well as a selection of Knockhill gift vouchers.

GREENPOWER TO GOODWOOD

The Greenpower International Final will take place at Goodwood this year. The series features teams of school children and young adults and is designed to create interest in STEM subjects. The very first Greenpower race took place at Goodwood in 1999. The Duke of Richmond said: "Greenpower started at Goodwood and we have always been very pleased to support their work in helping young people to be inspired to undertake a technical career, and to have a fantastic time doing so."

RICHARDSON'S ROOKIES

Ginetta Junior squad Richardson Racing has revealed its first three drivers for this season. The team powered Will Martin to nine wins and third place in the standings last year, and guided Luke Browning to third in the points the previous year too. Karting graduates Georgi Dimitrov, Rowan Vincent (below) and Trennon Bettany will all make their circuit racing debuts with the squad in Ginetta Junior this season.





A revival event was held at Melbourne Airfield last year

BURROWES

Plan to revive second permanent UK dragstrip

DRAG RACING

Plans are under way to revive the Melbourne Airfield site of the York Raceway dragstrip for racing.

Following the closure in 2017 of Long Marston Airfield's Shakespeare County Raceway to make way for the government backed Garden Village, Santa Pod has been the sole permanent dragstrip in Britain.

Motorcycle drag and sprint organiser Straightliners — led by founder Trevor Duckworth — and the UK Timing Association have mounted a campaign to get the Melbourne facility up and running again.

After a successful revival meeting held last year, a fresh fundraising incentive instigated by Duckworth and his team has already raised over £80,000 towards the required £100,000 target to resurface both lanes up to and beyond the eighth-mile distance in time for the intended reopening in August this year.

"Our aim is to have a new track with two six-metre lanes and for the track to be 500 metres in length," said Duckworth. "We will start eighth-mile racing and have ample braking on the same surface as the race track. When funds become available, we will extend the braking area so we can run full two-lane quarter-mile events."

Work is expected to start this month with the removal of the old spectator banking and plaining of the old surface.

York Raceway was first opened in 1977 by the Pennine Drag Racing Club. During the war, it was home to the RAF No.10 and No.575 Squadrons operating Douglas Dakotas and Handley Page Halifax four-engine bombers.

JERRY COOKSON

Worrad buys cars and rights to TOJ F2s

HISTORIC F2

The spectacular-looking TOJ Formula 2 cars that future F1 world champion Keke Rosberg raced in the 1970s could become a more familiar sight in historic racing since Briton Steve Worrad has acquired a cache of chassis from Canada over the winter.

Worrad has three chassis — Rosberg's primary F201 from 1976, the two F202s from 1977 (when the team struggled, prior to being disbanded mid-season), plus a spare monocoque. He has also



McKLEIN

bought the manufacturing rights and patterns.

Rosberg was by far the distinctive marque's most successful single-seater racer, although the machines were overweight. The Finn, famed for his car control, finished fourth in the European Championship round at France's Rouen-les-Essarts road circuit (above) and fifth on aggregate at Hockenheim, close to the company's factory in Bruchsal.

Using the acronym for Team Obermoser Jorg, and run by its founder, the company also built Achim Storz-bodied sports-prototypes, with BMW and Cosworth DFV engines, and F3 cars, one of which carried Peter Scharmann to the 1977 German title. Obermoser won Brands Hatch's second round of the 1975 European two-litre Championship, after which it collapsed.

MARCUS PYE





Master and apprentice go head-to-head

British GT4 champion Tom Canning has big boots to fill as he steps into the top GT3 class

JAMES NEWBOLD

This season, Tom Canning will be stepping into the boots of arguably the greatest driver in British GT's history as he replaces four-time series champion Jonny Adam alongside defending GT3 title-winner Graham Davidson in their triumphant TF Sport Aston Martin Vantage GT3. That's no small undertaking for a driver aged just 18.

But for a man who was still too young to legally drink the alcohol he sprayed on the podium after claiming the GT4 title with Ash Hand last season, Canning has a remarkably calm head on his shoulders — a fact reflected by Aston's decision to select him out of 22 other applicants as the winner of its revived Driver Academy.

One of the mentors on that programme was a certain Mr J Adam, the acknowledged master of pro-am racing, who joins Ahmad Al Harthy in the car on the other side of the TF garage. And you can bet the Aston factory ace's sights will be firmly set on title number five — as well as reclaiming the #1 that Canning and Davidson will use this year.

It's a whole different scale of challenge than what Canning has experienced before in his young career, so he's not wrong when he acknowledges that "there is some pressure there" — not least from Davidson, himself one of the benchmark amateurs in the series, who has worked with top pros Adam and Maxime Martin in recent seasons.

> **"Some might be demoralised with Adam in the same car but Canning knows it's a great opportunity"**

"It's a platform for him to take a big jump on from GT4 Silver-Silver and straight into Pro-Am in GT3," says Davidson about his new co-driver. "A lot of drivers at his age would normally be expected to do a few years of GT4 and then maybe step into GT3 in a Silver car."

It will be a big ask for Canning to replicate all the nuances of working with amateur drivers that Adam has picked up over the past decade in only his first season of GT3 — at the same time as learning the car and the art of mastering the traffic — but Canning is backing himself to succeed. After all, he's seen Adam's methods in action first-hand from his involvement in the Academy last season.

"Jonny helped me with simulator work and coaching, he was very helpful last year," reveals Canning. "He's a master of bringing on drivers, I certainly learned a lot from him as a young driver and he is where I want to be in a few years' time."

Canning says he's feeling "the best I've felt going into a championship ever" and, having quickly mastered the new-for-2019 Vantage GT4, is confident that he can adapt equally fast to the "quicker, louder and bigger" GT3 model in which he enjoyed a productive test at Silverstone last season.

"It's a really nice way to step up to GT3 because I know the team, I know Graham and I know that they're both capable of getting the job done," Canning continues. "My goal for this season is definitely to go for the championship. I know there might be some doubt on that as it's my first year in GT3, but I feel confident."

And, while some might be demoralised by having Adam in the same machinery, Canning knows it will be a great opportunity for him to learn at even closer quarters, sharing engineering debriefs and comparing minute details on the data traces.

"Having Jonny in the team is going to be brilliant," says Canning. "He's a really nice guy and easy to talk to, so there's a lot I can learn from him this season.

"One of the other reasons for this being the perfect opportunity for me to go into GT3 is having Jonny there to learn off. At the end of the day he is one of our competitors and if we are in the championship fight — which I'm confident we will be — the other car is going to be right there too, so I've still got to have the goal of outperforming him by the end of the season. I need to learn as much as I can but, at the end of the day, he is a competitor as well."

Canning and Davidson had similarly tough starts to last season before coming on strong in the second half of the year. Canning and Hand scored no points at all at the Oulton Park double-header that opened the season, while Davidson crashed out on the last lap of the second race to throw away potentially crucial points.

Neither can afford to give their rivals such a head start this time around if they are to keep the #1 on their windshield next year. Both know that, to do so, each will have to raise their performance another notch and defeat the master at his own game. This is a big year for Canning, but it might also be the making of him.

GRAND PRIX GREATS

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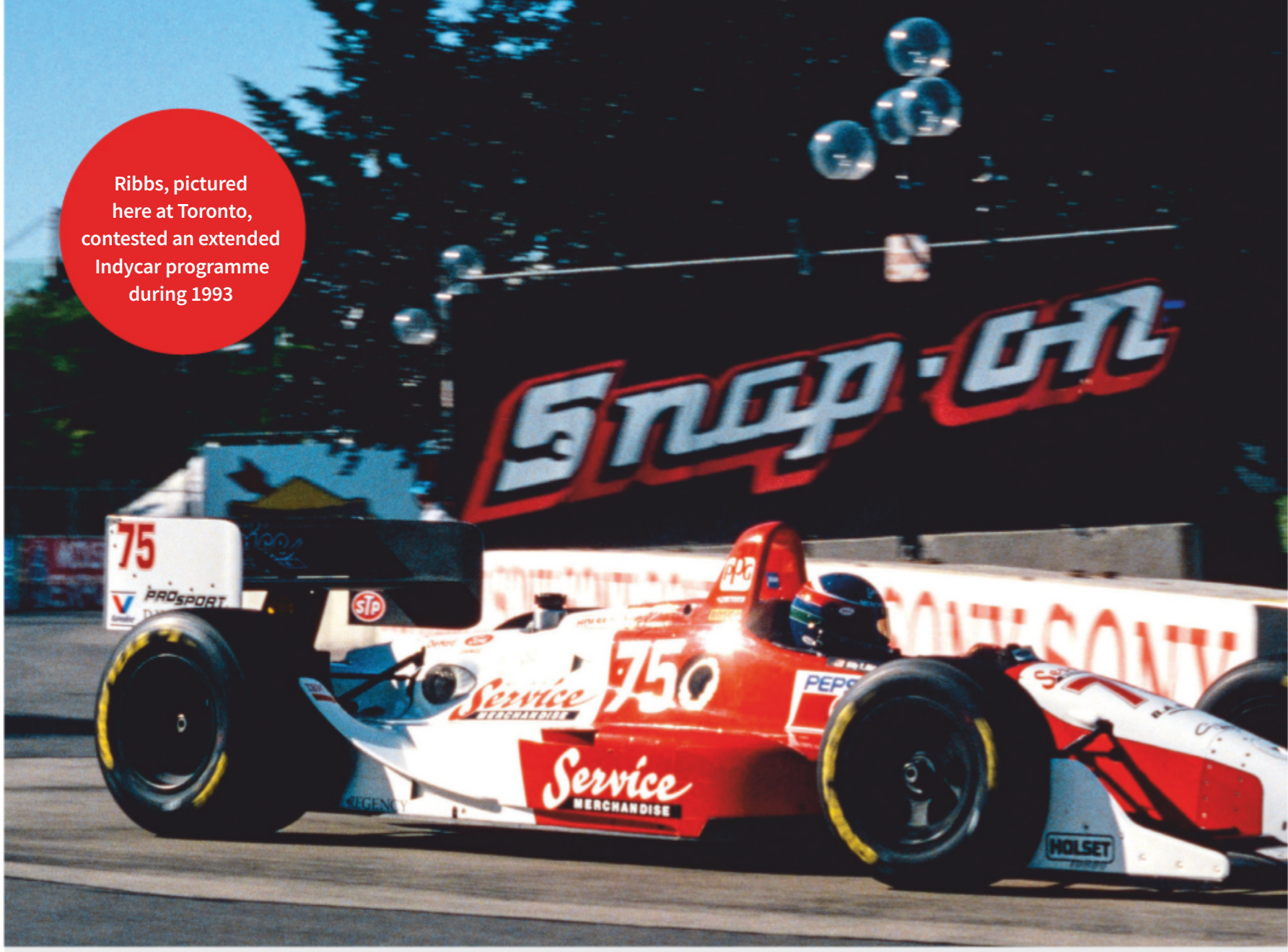
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Ribbs, pictured here at Toronto, contested an extended Indycar programme during 1993

PAVING THE WAY BY RACING AT

NETFLIX DOCUMENTARY
UPPITY: THE WILLY T RIBBS STORY

When Lewis Hamilton secured his sixth Formula 1 drivers' title at the end of last season, countless column inches were written and used to debate whether he is the greatest driver of his generation, perhaps even in the history of the sport.

Unsurprisingly, there was almost no mention about the colour of his skin, but why should there have been when that has nothing to do with how good a driver he or anyone else is? Sadly, that hasn't always been the case, and with the new Netflix documentary *Uppity: The Willy T Ribbs Story* this fact is laid bare.

Uppity tells the story of Ribbs, an African-American who fought discrimination to ultimately become the first black driver to qualify for the Indianapolis 500 in 1991. It charts the highs, very deep lows — such as withdrawing from a NASCAR event after receiving death threats purely for being black — and numerous controversies in his career.

While difficult at times to watch — brief clips of a Ku Klux Klan gathering and people wearing T-shirts with the n-word on them come to mind — this is ultimately a story about how Ribbs overcame prejudice and broke down barriers.

Much of the early part of the documentary focuses on his time in the Trans-Am Series and the relationship with his team-mate and eventual rival David Hobbs. In an interview for the programme, Hobbs describes Ribbs as being "very abrasive" and that he "didn't make friends easily", which is perhaps not surprising given the backlash he faced. Nevertheless, it's a theme that crops up at several points during his career and could occasionally end in a punch being thrown and Ribbs finding himself being sacked.

It's apparent early on that Ribbs relished breaking the status quo of competing in a sport dominated by white men. His celebration based on the 'shuffle' of Muhammad Ali, who he met in 1977, earned him the nickname 'Uppity' for his perceived arrogance. But this is something he appears to have embraced.

Hobbs is one of many voices featured within the documentary, which also includes two-time Indy 500 winner Al Unser Jr and Formula 1 supremo Bernie Ecclestone. A segment focuses on Ecclestone giving Ribbs an outing in his Brabham F1 car at Estoril at the end of 1985 after the American had signed a management deal with boxing promoter Don King, who claimed Ribbs would become the 'Ali of racing'.

It's one of several scarcely believable scenarios to take place during Ribbs's career, such as now-disgraced comedian Bill Cosby sponsoring his 1991 Indy 500 effort, or Ribbs punching Scott Pruett in a car park with Pruett's team-mate Bruce (now Caitlyn) Jenner watching on.

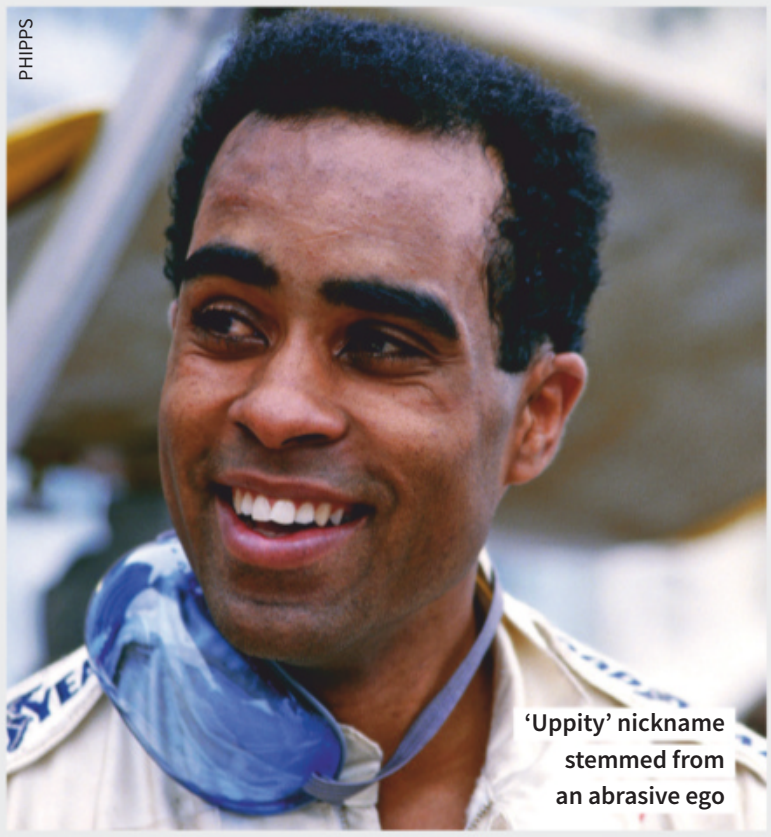
A number of former mechanics and team owners also provide first-hand accounts throughout, while there is a plethora of archive footage from Formula Atlantic and Trans-Am that is interspersed with article cuttings and pictures.

The culmination of the near-two-hour documentary is Ribbs's attempts to finally qualify for the Indy 500 in 1991 after a failed attempt in 1985. His conversations with team owner Derrick Walker in the pits are absorbing, and there's a real sense of desperation at this being a once-in-a-lifetime chance. The reaction of the paddock when Ribbs makes it into the race is a genuinely touching moment that ultimately defined his career and ends the documentary on a high.

Racing purists might question why there is no



THE BRICKYARD



‘Uppity’ nickname stemmed from an abrasive ego

mention of his near-full-time Indycar campaigns in 1993 and 1994, or that generic Brabham BT54 shots are used when referring to his F1 test.

At times the viewer is also left to read between the lines about how a car issue or team owner’s grudge was caused — whether Ribbs’s personality was the primary reason rather than the colour of his skin.

But all this doesn’t detract from an entertaining and interesting documentary, with Ribbs ultimately concluding that breaking down all these barriers and overcoming such adversity was winning in itself.

STEFAN MACKLEY

autosport.com/podcast



To start what will become a regular series of Autosport National podcasts, we look at some of the main themes from February’s edition of Autosport’s national racing supplement, including how Elite Motorsport has gone from club racing to Ginetta frontrunner and the success of the CSCC. Following the British GT media day, we also look ahead to the sportscar series’ 2020 season.

YouTube youtube.com/AUTOSPORTdotcom



To put it mildly, eyebrows were raised when it was announced that the FIA had reached a private “settlement” with Ferrari over its 2019 Formula 1 engine, after concluding an investigation into the team’s power unit amid allegations that Ferrari had circumvented the rules. The Autosport team discusses what the specific wording might imply. **Go to bit.ly/FerrariFIAengine**

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INTRODUCING



BUCHER

KYLE KIRKWOOD

The 21-year-old is picking up the trophies on the US racing ladder to Indy

MATT KEW

Aside from having the perfect name for a successful career in the US, 21-year-old Kyle Kirkwood seems pretty much destined for an IndyCar seat. Following a victorious transition to car racing in an F1600 part-season, he's swept all on his way up the ladder.

Where US single-seaters really rather embarrasses the European scene is in its laddered structure, whereby the champion of each formula is assured of a supported drive in the next tier. That doesn't leave much time for cash-strapped drivers to adjust to each new car, but it does pave a realistic path to the top flight.

Champion of US Formula 4, F3, USF2000 and Indy Pro 2000 in just three years, Kirkwood is delivering.

"I'm going to keep on the path towards IndyCar," he says. "I've already built a lot of contacts, I know most of the people in the paddock and I understand the cars pretty well already. That's where my focus is at the moment, but I never count stuff out and I never will."

"I DON'T HAVE THE LUXURY OF FINISHING OUTSIDE OF FIRST PLACE. I HAVE TO KEEP WINNING"

'Not counting stuff out' comes as he points to the Formula E car in the garage behind him. Kirkwood was called up by BMW to run in the post-Marrakech E-Prix rookie test through his ties with Andretti Autosport, with which he'll contest the 2020 Indy Lights season.

After a day's running, the hot-shot was fifth fastest overall and beat the time of temporary BMW team-mate Lucas Auer.

Some in the UK will remember Kirkwood's name from his Formula Ford 1600 outings in 2016, when he was seventh in the Festival and fourth in the Walter Hayes Trophy. Once place ahead of him in the Hayes at Silverstone was Oliver Askew, who won the 2019 Indy Lights title and will now graduate to IndyCar with McLaren SP this season. Kirkwood is two years his junior, so is in good shape to emulate his rival.

The pressure is non-stop, however. The very reason Kirkwood is so tied to the progression that the US market offers is because of tight purse strings so many face.

"I don't have the luxury to finish outside first place," he adds. "I have to keep winning and keep moving on. It pushes me to do the best that I can and at the same time it's very rewarding to do so."



BUCHER

CV

Age	21
2020	1st in IMSA Prototype Challenge at Daytona
2019	1st in Indy Pro 2000
2018	1st in USF2000
2018	1st in US Formula 3
2017	1st in US Formula 4
2016	3rd in US Formula 4
2016	4th in Walter Hayes Trophy



FROM THE ARCHIVE

Andrea de Cesaris pushes his Jordan-Ford 191 across the line in an attempt to secure fourth place after his throttle failed on the last lap of the 1991 Mexican Grand Prix. His efforts initially appeared to have been in vain when the stewards excluded him, but the decision was later rescinded when it was decided he had not started pushing the car until the race had ended. Riccardo Patrese (Williams-Renault FW14) took pole position and victory, in both instances ahead of team-mate Nigel Mansell, followed by the McLaren-Honda MP4/6 of Ayrton Senna.

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A Swift arrival in Victory Lane

6 March 1997

Swift ended an almost 14-year winless streak for US chassis constructors on its Indycar debut in the 1997 CART season opener at Homestead with Michael Andretti. Newman-Haas Racing was the only team running the Swift 007.i, and Andretti and team-mate Christian Fittipaldi were down in 14th and 15th in qualifying. But the race came to the 1991 champion.

Fittipaldi's race ended after 40 of 147 laps due to an oil leak, while changes made to the Swift after qualifying started to play into Andretti's hands early on as he battled to the front. Andretti, Gil de Ferran, polesitter Alex Zanardi and Paul Tracy fought for 30 laps — interrupted by a caution due to a huge accident for debutant Dario Franchitti — before de Ferran was wiped out by the lapped Dennis Vitolo, who came under fire from the top drivers.

The race was then largely under control from then on by Andretti. That was until a late caution confused officials as the then-fourth-placed Andretti was incorrectly waved by after the pace car picked him up instead of the Penske of leader Tracy, delaying the restart by 10 laps. Andretti beat Tracy by three seconds at the flag. The full results were not published until five hours later due to the caution mishap.

"A lot of people deserve credit for making this happen," said co-owner Carl Haas. "This couldn't have happened without 18 hours per day from the crew. I think it's still early days and there's a lot to come."

Elsewhere in the magazine, Michael Schumacher effectively ruled himself out of a 1997 Formula 1 title challenge with Ferrari in our full season preview, Colin McRae mastered the Safari Rally for Subaru, and the new Lola Formula 1 challenger was reported to be woefully off the pace in testing.

CRAIG WOOLLARD



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