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Michelin at the 2020 Le Mans 24 Hours

Exceptional circumstances for a very special race

A unique event on the motorsport calendar

Michelin's tyres for the 2020 Le Mans 24 Hours

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Exceptional circumstances for a very special race

By **Matthieu Bonardel** (Director, Michelin Motorsport)

“For the first time in its long history, this weekend’s Le Mans 24 Hours will take place behind closed doors, with neither spectators, sponsors nor partners in attendance. The other big difference is the event’s date-shift from June 13-14 to September 19-20, meaning a significantly greater proportion of the race will be run in the dark. Finally, rather than starting at its usual 3pm slot, the French classic will get underway half-an-hour earlier, at 2:30pm.”

“All of these changes – particularly those relating to the timetable and possible differences in the weather, not to mention Covid-19 hygiene measures – have impacted on Michelin Motorsport’s preparations for the event. Our plan effectively had to be adjusted in order to ensure everybody’s health and safety.

“One thing hasn’t changed, however, and that’s the moment everybody is eagerly awaiting, when the adrenaline rush begins as Michelin’s engineers and staff finally get to the circuit. They might be wearing masks, but the broad smiles behind them will testify to the passion that drives each and every one of them!”

A unique event on the motorsport calendar

More than any other race, Le Mans poses a unique challenge that demands maximum commitment from all those involved. And every year, it offers Michelin a fresh opportunity to showcase the long-lasting performance qualities of its products, while taking onboard the importance of the drivers’ confidence in how their tyres will perform from the start of the race all the way to the chequered flag. In racing, just as it does in relation to its road tyres, Michelin makes the same performance-made-to-last pledge to its partners and customers, in the knowledge that it has won Le Mans 28 times – including an ongoing run of 22 victories in a row.

A tyre’s overall performance does not merely concern its road-holding ability. It is also measured by the safety it delivers by enabling the short stopping distances, as well as its directional precision and traction characteristics in all types of conditions. These same essential parameters apply in racing, too, since they enable drivers to transmit the power of their cars to the ground in the most efficient way possible, whether the track is dry or wet.



A balanced performance package is vital to allow drivers maintain their rhythm and pace from one stint to the next and also run multiple stints on the same set of tyres. Being able to rely on rubber that consistently runs at its anticipated level of performance is fundamental to inspiring confidence behind the wheel and achieving results on the track.

In the complex situation in which we find ourselves today, and given the associated influence it has had on our routines, it is more important than ever to provide the drivers with tyres that instil peace of mind out on the circuit, particularly given that the 2020 Le Mans 24 Hours will take place at an unusual time of year and in different weather and daylight conditions to normal. Thankfully, Michelin's new range of endurance racing tyres – launched back at the beginning of the 2019/2020 FIA World Endurance Championship – has the situation covered.

Michelin's tyres for the 2020 Le Mans 24 Hours

The 2020 Le Mans 24 Hours will see Michelin work with 54 of the 59 cars, namely all five LMP1 entries, 19 of the 24 LMP2 cars and all of the LM GTE Pro and LM GTE Am runners. Whatever their class, Michelin's partners will be able to choose from three different types of slick (soft, medium and hard). Since the beginning of the current FIA WEC, Michelin's endurance range has benefitted from a revised casing design and a new compound in order to meet the performance requirements of this season's cars. The specification of these tyres was based on the originally-planned race dates and venues in order to cover the broadest possible range of temperatures. The Michelin range available for the 2020 Le Mans 24 Hours is engineered to cover a track-temperature range from 5°C to 65°C and deliver consistent performance throughout.

For the 2020 Le Mans 24 Hours, tyre allocations are different to previous editions due to the introduction of a new Hyperpole session for the six fastest cars after Thursday's qualifying in all four classes (LMP1, LMP2, GTE Pro and GTE Am). This ACO initiative has increased the number of tyres required for the event.

In addition to the basic allowance of 24 tyres for LMP1 and LMP2 entrants and 28 for LM GTE Pro and LM GTE Am competitors to cover free practice, opening qualifying and race-morning's warm-up, eight additional tyres will be provided to all the crews that contest the Hyperpole session.

For the race itself, the LMP1 cars will continue to benefit from an allocation of 48 tyres, with 56 for the LMP2 runners and 60 for the LM GTE Pro and LM GTE Am entrants.

- **Hybrid and non-hybrid LMP1 prototypes**

In the course of the development of its current tyres for the hybrid LMP1 prototypes, Michelin worked closely with Toyota Gazoo Racing to keep providing it with the best possible package as a function of the technical characteristics of its car which stands out as the most powerful on the grid (approximately 1,000hp) and features a different front/rear weight distribution compared with the non-hybrid LMP1s. As a function of the cars' different features, the casings and compounds of the tyres they use have been adapted to their respective weight distribution, aerodynamic, power and torque characteristics and type of power unit/transmission.



For example, the hybrid LMP1 prototypes have four driven wheels whereas the non-hybrids are rear-wheel drive only. For all these reasons, Michelin has developed distinct ranges for the two types of car, with the main difference being the front-tyre casings. It is important to note that it is the non-hybrid LMP1s that have evolved the most significantly in performance terms since last year's Le Mans.

Both the hybrid and non-hybrid LM P1 prototypes run 31/71R18 tyres front and rear.

In addition to slick tyres, Michelin's LMP1 partners will be able to fit the MICHELIN Hybrid, a 'slick' intermediate designed for damp and drying conditions. WETs and FULL WETs will be available for heavier rain.

- **LMP2 prototypes**

Michelin's engineers have successfully kept pace with the superior performance of today's LMP2 cars, taking advantage of the 2018/2019 campaign to improve on several fronts after introducing significant changes to its tyres in 2018 ahead of the upcoming Super Season. For Le Mans, in compliance with the class's regulations, teams will be able to choose between two types of rain tyre: an intermediate with a lightly-grooved pattern and an operating window similar to that of the LMP1 'Hybrid' slick, plus a more conventional rain tyre with more extensive grooving for conditions where higher quantities of water need to be cleared.

The tyres for the LMP2 cars are 30/68-18 and 31/71-18 front and rear.

- **LM GTE Pro and LM GTE Am**

Here again, the work of Michelin's engineers has focused on its slick compounds in order to cover broader temperature windows. Although the same family of tyres covers both classes, variants have been made to match the specific characteristics of the models raced by the different manufacturers. As in LMP2, the teams took advantage of the long 2018/2019 Super Season to optimise the performance of their respective cars and Michelin has sought to take into account the specific demands made of its tyres by each one while at the same time delivering consistently high performance and allowing its partners to run multi-stint strategies, in keeping with its endurance racing DNA.

To optimise the performance of its tyres while working within the sanitary measures that have been put into place for Le Mans, Michelin will work out of a 2,300-square metre covered facility close to the main paddock where its 11,000 tyres will be stored.

Michelin's staff at the race includes 50 team advisors and engineers, plus 64 fitters.



Interview of Pierre Alves, FIA WEC Programme Manager, Michelin Motorsport

- **What have you learnt from the performance of your tyres at the different circuits visited so far this season?**

“The development of this season’s tyres was based on a calendar that encompassed a diverse variety of venues. From Silverstone to Spa, our range has covered the requirements of all four classes perfectly and our partners have had the opportunity to sample all the available specifications. The cancellation of the 6 Hours of São Paulo – which had been scheduled to take place in the middle of the Brazilian summer – and its replacement by the Lone Star Le Mans at Austin, USA, in the Texan winter, led us to re-organise our factory planning so that we could provide our soft compound earlier in the campaign. Against the backdrop of a shifting calendar, our production and logistics departments in Clermont-Ferrand demonstrated outstanding flexibility and an ability to respond swiftly as they rose to this tremendous task. For Le Mans, the chief challenge our teams faced was that of the volume of tyres involved given the particularly difficult context of health and safety concerns and shorter working hours. Everybody involved can be proud of the work they have accomplished, and I thank them all most sincerely for that.”

- **This year’s Le Mans takes place in a time of unprecedented sanitary measures and behind closed doors. How has that impacted on Michelin’s teams?**

“Since the end of lockdown, a strict protocol has been in place at Michelin Motorsport’s premises in Clermont-Ferrand. All our staff have been educated in health hazards thanks to a series of training sessions and we will apply these good practices at Le Mans as we do elsewhere. The return to endurance racing paddocks has gone well so far thanks to the ACO’s reassuring protocols which dovetail perfectly with our own.

“Restrictions on international travel mean we are having to manage without the on-site support of our engineering colleagues from America, Japan and Australia, and we were unable to reinforce our teams as much as we would have liked for this important race. We have therefore had to prioritise and select those team members who are the most vital to our on-event operations to ensure that this year’s Le Mans 24 Hours goes as smoothly and successfully as possible.”

- **Does the fact that the race takes place in September rather than its traditional June slot pose different challenges with regard to tyres?**

“At the end of the day, Le Mans is still Le Mans. Whether the race is held in June or September, the circuit is the same, with a cocktail very high speeds, heavy braking zones, repeated hard re-acceleration and a need for mechanical grip through Tertre Rouge, Indianapolis, Arnage and particularly the Porsche Curves.

“The average daytime and night-time temperatures and the chances of rain are reasonably similar in September compared to June. The biggest difference will be that nearly 12 hours of the race will take place in darkness, as opposed to just eight hours in June. With tyre changes no longer permitted at the same time as refuelling, the major challenge will be to multi-stint. The vast majority of competitors at Le Mans have placed their faith in Michelin tyres for their excellent durability and the quality of the technical support we provide. We are more than ready to partner them to victory!”



MissionH24: Michelin paving the way for fuel-cell-powered racing cars

Revealed in September 2018, the MissionH24 project results from an initiative involving the ACO (Automobile Club de l'Ouest, organiser of the Le Mans 24 Hours) and GreenGT, a pioneering business in the field of high-power fuel cells.

The project's aim is to pave the way for the participation of fuel-cell-powered prototypes in the Le Mans 24 Hours by 2024 and provide its partners with a laboratory for their mobility-related innovations. Within this framework, GreenGT has developed the first fuel-cell-powered electric LMP car (Le Mans Prototype) – the LMPH2G – which will be run by H24Racing whose mission is to perfect its performance by means of a bespoke test programme and attend meetings of the ACO-organised Michelin Le Mans Cup.

Michelin's recently-signed agreement with the ACO to be a preferential partner of MissionH24 sees Groupe Michelin take on an active role in the car's power unit while continuing as exclusive tyre supplier to H24Racing.

In addition to providing the LMPH2G's high-power fuel cell, Symbio – a joint-venture formed by Michelin and Faurecia in November 2019 – will bring its mobility-related fuel-cell technology expertise to the table. As a partner of GreenGT for more than 10 years, it has gained a thorough understanding of the importance of the technological stakes associated with motor racing.

By taking its technology forward in stages in the course of the car's development, Symbio stands to glean valuable experience over a relatively short timeframe, while the data it harvests will accelerate the development of efficient technical solutions likely to move on to the production phase. Through its involvement in the MissionH24 project, Symbio will forge a competitive advantage in its field as it seeks to establish itself as a major player in the world of fuel-cell mobility over the coming years.

In order for motorsport to play its role fully as a laboratory for mobility, Michelin and Symbio will share their expertise in their respective fields with motor racing's authorities by participating in the drawing up of technical regulations for fuel-cell racing cars.

Indeed, Michelin and Symbio are already working alongside the ACO to prepare technical regulations that will enable fuel-cell cars to compete in a bespoke class at Le Mans by 2024.

