

MICHELIN



PRESS KIT

FIA WORLD ENDURANCE CHAMPIONSHIP



MICHELIN



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NEW (SUPER) SEASON, NEW PLAYGROUND FOR MICHELIN

The new-look FIA World Endurance Championship has the makings of being an exceptional competition. Not only does the 2018/2019 Super Season span two calendar years but, for the very first time, the programme concludes with the Le Mans 24 Hours. Because of this, we have had to provide our partners with tyres that pack technology and deliver performance that will continue to be relevant more than a year from now, despite the fact that the cars they equip will inevitably have moved forward. This was a big challenge for us but we rose to it with both confidence and humility. As a company, Michelin has always invested in technology, and this naturally extends to the world of motorsport, too. The long-term commitments we have made in endurance racing – which take us up to at least 2021 as far as the FIA WEC is concerned, and which also

include the Asian Le Mans Series and, from 2019, IMSA – testify to the knowhow we have built up in the discipline, yet at the same time we are perfectly aware that we can never take anything for granted. Some of our tyres are brand new and being sure that we provide our partners with the most appropriate solution at the right time is an additional challenge for our team advisers. Performance naturally plays an important role in this sport, but being able to deliver that performance consistently over a period of time is equally vital. It is therefore our hope that the quality of the show the drivers involved in the Super Season put on will be due in part to the quality of the tyres we have developed for them and, in many cases, with their input. I wish you all a highly rewarding and successful season and look forward to sharing the passion you have for this tremendous discipline.

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THE 2018/2019 SUPER SEASON SIGNIFICANT CHANGES ON THE TECHNICAL FRONT





The menu of the 2018/2019 FIA WEC sees world class endurance racing provide yet another example of its inventive thinking with a programme of eight rounds that straddle two calendar years, including two attempts at the Le Mans 24 Hours, plus one 12-hour race: the 1,500 Miles of Sebring (see calendar, page 17). In the wake of the in-depth changes to the technical regulations that were introduced in 2017, notably concerning the number of sets of tyres cars could use at each race (four instead of

the previous allocation of six in the case of LM P1 and LM GTE Pro runners at six-hour races), the quota rule has evolved further still. In 2018/2019, the regulations no longer reason in terms of tyre sets (one set = four tyres). Instead, they take into account the number of actual tyres cars may consume at each round. At the same time, the two so-called 'joker' tyres that teams were formerly able to bring out at any point over the weekend are now incorporated in the qualifying + race package (see table below).

| Category | 6 hours races | | 1,500 Miles of Sebring | | Le Mans 24 Hours | |
|------------|---------------|---------------|------------------------|---------------|-------------------------|------|
| | Free practice | Qualif & Race | Free practice | Qualif & Race | Qualif & Race + Warm-up | Race |
| LM P1* | 12 | 18 | 24 | 36 | 28 | 48 |
| LM P2 | 12 | 18 | 24 | 36 | 28 | 56 |
| LM GTE-Pro | 12 | 18 | 24 | 36 | 32 | 60 |
| LM GTE-Am | 16 | 26 | 32 | 52 | 32 | 60 |

*Hybrid or non-hybrid cars

In another new development, teams may now change wheels while refuelling is in progress. This new rule will clearly have an impact on race strategies given that the smaller tyre allocations compel teams to double stint, just as they did last season. This move mirrors the importance both Michelin and the FIA World Endurance Championship place on respecting the environment. When it comes to tyres, reducing the consumption of raw materials and energy are key to sustainable mobility, as is minimising CO₂

emissions at the production and recycling stages. More generally, Michelin believes that enforcing technical regulations that are relevant will incite all the stakeholders to invest in energy efficiency and sporting efficiency without detracting from the spectacle offered by motor racing.

The combination of restricting the number of tyres cars are authorised to use at each race while delivering durable, high performance fits perfectly with Michelin's vision of motorsport.



MICHELIN'S TYRES FOR THE FIA WORLD ENDURANCE CHAMPIONSHIP

DEVELOPMENTS IN EVERY CLASS



LM P1: DIFFERENT TYRES FOR HYBRID AND NON-HYBRID CARS

The LM P1 field for 2018/2019 has seen significant changes with the arrival of new teams and a big entry of non-hybrid cars. Toyota Gazoo Racing's two TS-050-Hybrids consequently face opposition from the class's newcomers, namely ByKolles Racing, CEFC TRSM Racing, Dragonspeed, Rebellion Racing and SMP Racing who will run non-hybrid prototypes featuring four different chassis and four different engines in all. The clear difference between the characteristics of the hybrid and non-hybrid cars and the different demands they make on their tyres have led Michelin to develop specific ranges to address the respective requirements of each category, although both ranges carry over the three compound choices that were available last season:

- Soft
- Medium
- Hard

Indeed, Michelin took advantage of the changes to the regulations introduced in 2017 to make the appellation of the different options it took to races easier to understand, both for the championship's different players and for the public. The terms Soft,

Medium and Hard – which will apply to all four classes in 2018/2019 – are clear and improve the understanding of strategies, while at the same time carrying over the notion of 'temperature window' which Michelin introduced four years ago to facilitate its dialogue with the teams' engineers.

The hybrid and non-hybrid LM P1 prototypes run the same size front and rear tyres (31/71R18). At least two weeks (two months in some situations) ahead of every race, Michelin's partners will be requested to select two of these three specifications and they will then need to adjust their respective strategies as a function of the weather conditions encountered during race weekends. For Le Mans, however, Michelin's complete endurance racing range will be available.

In addition to dry-weather slicks, the French firm's range also includes the MICHELIN Hybride (an 'intermediate' slick) which was designed for damp and drying conditions, as well as Wets and Full Wets in the case of heavier rain. These tyres are identical to the wet weather tyres that were available last season when their performance was acclaimed by Michelin's partners on several occasions.

DIFFERENCES BETWEEN THE HYBRID AND NON-HYBRID LM P1 TYRES

Michelin designs tyres for all of the different types of vehicle and technology that play a part in mobility today. This applies equally to motor racing, where the designs of its tyres' constructions and compounds are adapted as a function of the weight distribution of the different cars, the aerodynamic downforce they generate, as well as their power, torque and powertrain. The LM P1 Hybrid prototypes feature four-wheel drive transmission, whereas the non-hybrid LM P1s are exclusively rear-wheel drive. For the latter,

the work of Michelin Motorsport's engineers consequently focused on the front tyres since they do not have to cope with the same constraints. They therefore required specific development work, with bespoke constructions and compounds.

The tyres used by the LM P1 Hybrid cars, however, are very similar to those employed in 2017 given the satisfactory results they obtained last season and based on the data that was collected during winter testing.

LM P2: NEW FROM A TO Z!

Although absent from the class in 2017, Michelin returns to LM P2 for the 2018/2019 campaign when it will work with several teams with entirely new tyres designed using data collected notably in the ELMS. The strong results posted by its partner teams towards the end of last season served as a first-class starting point. Michelin Motorsport's engineers have succeeded in advancing simultaneously in several of the areas that contribute to performance.

As in the FIA WEC's other classes, the range comprises three compounds (Soft, Medium and Hard), while two rain tyres are available in compliance with the regu-

lations that apply to this class (in LM P1, there are no restrictions concerning the number of wet weather compounds). The first is an intermediate tyre with a lightly grooved tread and an operating window similar that of the Hybride slick available for the LM P1 cars. The alternative for the LM P2 prototypes is a more conventional rain tyre with a construction adapted to poor conditions. All the cars will have the same covers for the entire season (front: 30/68-18 / rear: 31/71-18).

As in previous years, the tyres used in the LM P2 class are not 'confidential', i.e. they are not covered by trade secrets.



LM GTE Pro AND LM GTE Am DIFFERENT TYRES FOR EACH CAR!



The close work Michelin carried out in conjunction with all the manufacturers active in LM GTE over the winter break has led to the development of specific tyres to cover the models' different technical characteristics and help the drivers maximise the potential of each car. This necessitated an ambitious testing programme, especially as the 2018/2019 Super Season sees BMW Team MTEK and Aston Martin Racing join Ferrari, Ford and Porsche as Michelin partners with completely new cars. The complex testing process began as soon as the 2017 campaign concluded at the rookie try-out in Bahrain.

Given the extent of the challenge and the high number of carmakers involved, Michelin Motorsport's engineers worked throughout the winter recess, although their mission was eased by the company's capacity for innovation and the privileged relationship it enjoys with its partners in

both the world of motorsport and the realm of road cars. The result is a new range of endurance racing tyres that stand out as more competitive than ever across the full spectrum of track conditions and temperatures.

Meanwhile, there are new developments in LM GTE Am, too. In 2017, the Am cars raced on tyres designed by the LM GTE Pro machines the previous season, but both classes now have access to the same-generation solutions for the 2018/2019 series. This change stems from the fact that the cars' homologation now spans a period of several years and the technical specifications of the Pro and Am cars are relatively similar. Here again, the availability of three compounds applies (Soft, Medium and Hard), although the allocations per race differ in the two classes (see table, page 5).

THREE QUESTIONS TO
JÉRÔME MONDAIN
MANAGER OF MICHELIN'S FIA WEC
PROGRAMME





What does the Super Season change for Michelin?

Our calendar of work is the same since investigating ways to improve our tyres and processes is an ongoing job. The groundwork necessary ahead of any new season is always the same, too. That said, the fact that the Super Season includes two attempts at the Le Mans 24 Hours leads to high expectations and means we will have to work even harder to prepare for both visits to La Sarthe. We effectively need to have a range of competitive tyres for two Le Mans, one of which takes place in more than a year's time. That's a considerable challenge but one that all our partners are intent on carrying off.

Will the tyres be the same for the entire Super Season, even though it straddles two calendar years?

Absolutely. With the exception of the LM P1 Hybrid class, the regulations forbid any evolutions to

tyre specifications and no 'jokers' are planned. That said, should a particular manufacturer suffer from a lack of competitiveness compared with its rivals, it will be able to request authorisation from the FIA to introduce an evolution. For that to be considered, though, there needs to be competition between tyre manufacturers and all the entries in the two LM P1 classes, as well as in LM GTE Pro and Am, have opted to race on Michelin rubber.

Will the new regulation that allows tyres to be changed while the cars are being refuelled have an impact on tyre strategy?

We provide our partners with tyres that deliver consistent, high performance and which are capable of completing two or even three stints. The new rule clearly has consequences for Michelin because it will incite teams to change tyres more frequently than we have seen in the recent past, especially at Le Mans. They will therefore consume more and this will have an impact on strategy.

MICHELIN'S FIA WEC PARTNERS



The 2018/2019 FIA World Endurance Championship has attracted 36 entries (LM P1: 10 / LM P2: 7 / LM GTE Pro: 10 / LM GE Am: 9). Michelin provides tyres to all the teams entered in the LM P1, LM GTE Pro and LM GTE AM classes but shares the LM P2 field with its competitor.

| LM P1 (10) | | | |
|-------------|---------------------|---------------------|-----------------------------|
| Race number | Team | Car | Drivers |
| 1 | Rebellion Racing | Rebellion R13 | Lotterer-Senna-Jani |
| 3 | Rebellion Racing | Rebellion R 13 | Laurent-Beche-Menezes |
| 4 | ByKolles Racing | ENSO CLM P1/01 | Webb |
| 5 | CEFC TRSM Racing | Ginetta G60-LT P1 | Robertson |
| 6 | CEFC TRSM Racing | Ginetta G60-LT P1 | Rowland |
| 7 | Toyota Gazoo Racing | Toyota TS050 HYBRID | Kobayashi-Conway-Lopez |
| 8 | Toyota Gazoo Racing | Toyota TS050 HYBRID | Buemi-Nakajima-Alonso |
| 10 | DragonSpeed | BR1 | Van der Zande-Hedman-Hanley |
| 11 | SMP Racing | BR1 | Aleshin |
| 17 | SMP Racing | BR1 | Petrov |

LM P1 Hybrid

Toyota Gazoo Racing

The Japanese carmaker has entered two Toyota TS-050 Hybrids, one for Kamui Kobayashi/Mike Conway/José Maria Lopez (N°7) and the other for Sébastien Buemi/Kazuki Nakajima/Fernando Alonso (N°8). Two-time Formula 1 world champion Alonso is making his debut in endurance racing's blue ribbon class. Toyota is the only team running a hybrid prototype.

LM P1 Non-Hybrid

This class features eight cars and, after the confirmation of ByKolles Racing, marks the return of Rebellion Racing to LM P1 after a season in LM P2. The crew of the Swiss outfit's N°1 car includes former Le Mans winners André Lotterer (three Le Mans victories with Audi) and Neel Jani (2016 world champion and one Le Mans win with Porsche). Neel Jani raced for Rebellion at the end of the Noughties. The list of non-hybrid LM P1 entries continues with CEFC TRSM Racing, Dragonspeed and SMP Racing. The class features no fewer than four different types of chassis and four different engines.



LM P2 (7)

| Race number | Team |
|-------------|-------------------------|
| 28 | TDS Racing |
| 29 | Racing Team Nederland |
| 31 | DragonSpeed |
| 36 | Signatech-Alpine Matmut |
| 37 | Jackie Chan DC Racing |
| 38 | Jackie Chan DC Racing |
| 50 | Larbre Compétition |

Michelin is making its comeback to LM P2 in association with several teams, the names of which will be announced at the pre-season Prologue at Le Castellet, France. Michelin has developed a new range of tyres for this class which is the only one to feature two tyre manufacturers.

LM GTE-PRO (10)

| Race number | Team | Car | Drivers |
|-------------|---------------------------|--------------------------|----------------------|
| 51 | AF Corse | Ferrari 488 GTE | Pier Guidi-Calado |
| 66 | Ford Chip Ganassi Team UK | Ford GT | Mücke-Pla |
| 67 | Ford Chip Ganassi Team UK | Ford GT | Tincknell-Priaux |
| 71 | AF Corse | Ferrari 488 GTE | Rigon-Bird |
| 81 | BMW Team MTEK | BMW M8 GTE | Tomczyk-Catsburg-Eng |
| 82 | BMW Team MTEK | BMW M8 GTE | Sims-Farfus-da Costa |
| 91 | Porsche GT Team | Porsche 911 RSR | Bruni-Lietz |
| 92 | Porsche GT Team | Porsche 911 RSR | Estre-Christensen |
| 95 | Aston Martin Racing | Aston Martin Vantage GTE | Thiim-Sorensen |
| 97 | Aston Martin Racing | Aston Martin Vantage GTE | Martin-Lynn |

LM GTE-PRO

Compared with 2017, Michelin has two new partners in the LM GTE Pro class, namely Aston Martin Racing (which is racing the new Vantage) and BMW Team MTEK (which is new to the championship). The two makes worked hard with Michelin over the winter break to define the tyre specifications that best suit their respective cars. The new BMW M8 GTE has already raced in association with Michelin in the USA within the framework of the IMSA WeatherTech SportsCar Championship, notably at the Rolex 24 at Daytona and Mobil1-12 Hours of Sebring.



LM GTE Am (9)

| Race number | Team | Car | Drivers |
|-------------|----------------------|--------------------------|------------------------------|
| 54 | Spirit of Race | Ferrari 488 GTE | Flohr-Castellacci-Fisichella |
| 56 | Project 1 Motorsport | Porsche 911 RSR | Bergmeister-Lindsey-Perfetti |
| 61 | Clearwater Racing | Ferrari 488 GTE | Mok-Sawa-Griffin |
| 70 | MR Racing | Ferrari 488 GTE | Ishikawa-Cheever-Beretta |
| 77 | Dempsey Proton | Porsche 911 RSR | Cairolì |
| 86 | Gulf Racing UK | Porsche 911 RSR | Wainwright |
| 88 | Dempsey Proton | Porsche 911 RSR | Campbell |
| 90 | TF Sport | Aston Martin Vantage GTE | Hankey-Eastwood-Yoluc |
| 98 | Aston Martin Racing | Aston Martin Vantage GTE | Dalla Lana-Lauda-Lamy |

LM GTE Am

In LM GTE Am, Michelin is providing tyres for the TF Sport and Aston Martin Racing Aston Martins as the French firm and British carmaker reunite. The Aston Martins face competition from a field of three Ferraris and four Porsches which will all race on Michelin rubber as well.

THE 2018/2019 FIA WEC CALENDAR



PROLOGUE – LE CASTELLET
(FRANCE): APRIL 6-7, 2018

LE MANS 24 HOURS
(FRANCE): JUNE 16-17, 2018

6 HOURS OF SPA-FRANCORCHAMPS
(BELGIUM): MAY 5, 2018

LE MANS 24 HOURS
(FRANCE): JUNE 15-16, 2019

6 HOURS OF SILVERSTONE
(GREAT BRITAIN): AUGUST 19, 2018

6 HOURS OF SPA-FRANCORCHAMPS
(BELGIUM): MAY 4, 2019

6 HOURS OF SHANGHAI (CHINA):
NOVEMBER 18, 2018

1,500 MILES OF SEBRING (USA):
MARCH 16-17, 2019

6 HOURS OF FUJI (JAPAN):
OCTOBER 14, 2018



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