









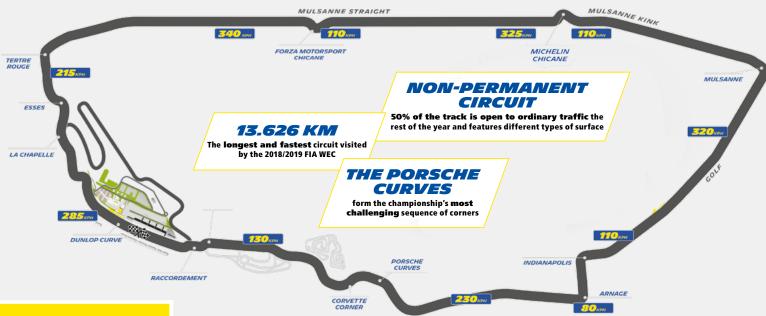




# THE 2019 LE MANS 24 HOURS LEMANS



### THE CIRCUIT







Michelin tyres trucked to Le Mans in 28 semi-trailers (plus 2,000 tyres in 5 semi-trailers for the Road to Le Mans)



square metre covered marquee for storing and fitting Michelin tyres



#### **FEATURES**

The Circuit des 24 Heures – aka Circuit de la Sarthe – is the longest and fastest venue visited by the 2018/2019 FIA WEC. The average speed of a qualifying lap is more than 250kph. The track's long straights make huge demands on the tyres' casings, even though the infamous Mulsanne Straight was split into three sections by two chicanes some 20 years ago. Grip levels vary depending on the surface type (busy trunk roads, Le Mans-Bugatti circuit) but tyre wear is relatively low.















|                  | SUNDAY, JUNE 9  |
|------------------|---|
| 2:30pm-7:00pm    | Scrutineering, Place de la République, Le Mans                |
|                  | MONDAY, JUNE 10   |
| 10:00am-6:00pm   | Scrutineering, Place de la République, Le Mans                |
| 6:00pm-6:30pm    | Handprints of 2018 winners set in stone, city centre, Le Mans |
|                  | TUESDAY, JUNE 11  |
| 10:30am-10:45am  | Official drivers' photo (start/finish straight)               |
| 5:00pm-6:30pm    | Autograph-signing session (pit lane)                          |
|                  | WEDNESDAY, JUNE 12  |
| 10:00am-3:00pm   | Pit walk  |
| 4:00pm-8:00pm    | Free Practice (Le Mans 24 Hours)                              |
| 8:30pm-9:30pm    | Free Practice (Road to Le Mans)                               |
| 10:00pm-midnight | Qualifying Practice 1 (Le Mans 24 Hours)                      |
|                  | THURSDAY, JUNE 13   |
| 8:30am-9:30am    | Free Practice 2 (Road to Le Mans)                             |
| 1:00pm-1:20pm    | Qualifying Practice 1 (Road to Le Mans)                       |
| 1:35pm-1:55pm    | Qualifying Practice 2 (Road to Le Mans)                       |
| 5:30pm-6:25pm    | Road to Le Mans (Race 1)                                      |
| 7:00pm-9:00pm    | Qualifying Practice 2 (Le Mans 24 Hours)                      |
| 10:00pm-midnight | Qualifying Practice 3 (Le Mans 24 Hours)                      |
|                  | FRIDAY, JUNE 14   |
| 10:00am-8:00pm   | Pit lane open   |
| 5:00pm-6:30pm    | Drivers' Parade, city centre, Le Mans                         |
|                  | SATURDAY, JUNE 15   |
| 9:00am-9:45am    | Warm-up (Le Mans 24 Hours)                                    |
| 11:30am-12:25pm  | Road to Le Mans (Race 2)                                      |
| 3:00PM           | START, 2019 LE MANS 24 HOURS                                  |
|                  | SUNDAY, JUNE 16   |
| 3:00PM           | FINISH, 2019 LE MANS 24 HOURS                                 |
| After 3:00pm     | Podium ceremony   |



Endurance Racing Programme Manager, Michelin Motorsport

LE MANS IS AN EXCEPTIONALLY LONG, FAST CIRCUIT, SO IT POSES A UNIQUE CHALLENGE AS FAR AS TYRES ARE **CONCERNED BECAUSE OF** THE HIGH TOP AND AVERAGE SPEEDS THE CARS REACH, AS WELL AS THE DEMANDS IT PLACES ON TYRES. On top of that, it isn't a permanent facility, so we can only test at Le Mans when official practice sessions are organised. This year is probably our first time here with the same range we had for the previous year's race. That's because the calendar of the FIA WEC's 2018/2019 Super Season includes two visits to Le Mans and, in keeping with the regulations, we must race with the same choice we had in 2018. The benefit of that is that we now have good experience of the tyres our 53 partners will use. At the same time, though, we obviously have no control over the conditions or weather, so we will need to adapt.

### **RECORDS TO BEAT** AT LE MANS

**20** The distance (metres) that **separated** the two Ford GT40s at the finish in 1966

349.80km The biggest ever gap between the winner and second place

**405**KPH The highest speed ever registered at Le Mans (1988, WM-Peugeot)

The number of **Porsche entries** (out of a total entry of 49 cars) for the 1971 race

The number of wins scored by Tom Kristensen at Le Mans

The number of Le Mans starts by Henri Pescarolo

**19** The number of **Porsche wins** at Le Mans

**21** The number of consecutive **wins by the same tyre** manufacturer (Michelin) at Le Mans

















#### LE MANS 24 HOURS TYRE SIZES

| SLICK<br>SOFT - MEDIUM - HARD | INTERMEDIATE<br>SLICK | WET      | FULL WET |
|-------------------------------|-----------------------|----------|----------|
| 31/71-18                      | 31/71-18              | 31/71-18 | 31/71-18 |

WIDTH (CM) / EXTERIOR DIAMETER (CM) X INTERIOR DIAMETER (INCHES).

#### **TYRE QUOTAS**

| Free practice, qualifying, warm-up | Race            |
|------------------------------------|-----------------|
| 28 tyres                           | <b>48</b> tyres |
|                                    |                 |

| WET TRACK                |     |          |
|--------------------------|-----|----------|
|                          |     |          |
| Hybrid<br>(Intermediate) | Wet | Full Wet |

## IMPITYRES

Michelin has developed tyres for the Toyota hybrid prototypes as well as for its other LM P1 partners whose cars are powered solely by an internal combustion engine. In compliance with the regulations, the tyres supplied for the four-wheel drive hybrid Toyotas and two-wheel drive non-hybrid LM P1s at Le Mans are the same as 2018.

#### **SLICK TYRES**

**Soft:** for non-abrasive track surfaces, low temperatures (less than 15°C) or at night **Medium:** for average-wearing or 'rubbered' track surfaces, temperatures in excess of 15°C Hard: abrasive track surfaces, demanding track configurations, temperatures in excess of 30°C

#### **INTERMEDIATE SLICK TYRES**

'Hybrid' intermediate: a pattern-less tread for use in damp conditions, or when conditions differ from one part of the track to another, a scenario frequently encountered at Le Mans. The revolutionary Hybrid intermediate was first raced at Spa in 2012 and first used at Le Mans in 2013

Wet and Full Wet: can have extra grooves cut into their tread pattern depending on how much water there is to clear. Cover a broad spectrum of conditions

#### ENTRY LIST | M P1

| N°1  | REBELLION RACING - REBELLION R13 - GIBSON • NEEL JANI / ANDRÉ LOTTERER / BRUNO SENNA              | MICHELIN |
|------|---|----------|
| N°3  | REBELLION RACING - REBELLION R13 - GIBSON • THOMAS LAURENT / NATHANAËL BERTHON / GUSTAVO MENEZES  | MICHELIN |
| N°4  | BYKOLLES RACING TEAM - ENSO CLM P1/01 - NISMO • TOM DILLMANN / OLIVER WEBB / PAOLO RUBERTI        | MICHELIN |
| N°7  | TOYOTA GAZOO RACING - TOYOTA TS050 - HYBRID • MIKE CONWAY / KAMUI KOBAYASHI / JOSE MARIA LOPEZ    | MICHELIN |
| N°8  | TOYOTA GAZOO RACING - TOYOTA TS050 - HYBRID • SÉBASTIEN BUEMI / KAZUKI NAKAJIMA / FERNANDO ALONSO | MICHELIN |
| N°10 | DRAGONSPEED - BR ENGINEERING BR1 - GIBSON • HENRIK HEDMAN / BEN HANLEY / RENGER VAN DER ZANDE     | MICHELIN |
| N°11 | SMP RACING - BR ENGINEERING BR1 - AER • VITALY PETROV / MIKHAIL ALESHIN / STOFFEL VANDOORNE       | MICHELIN |
| N°17 | SMP RACING - BR ENGINEERING BR1 - AER • STÉPHANE SARRAZIN / EGOR ORUDZHEV / SERGEY SIROTKIN       | MICHELIN |

## PERFORMANCE MADE TO LAST.



WITH THE MICHELIN® PILOT® RANGE® OF TYRES.















## LM P2 TYRES

Development work for Le Mans 2018 focused on upgrading performance with no detriment to longevity. Michelin now has a year's experience with these tyres under its belt and the teams have been able to optimise the set-ups of their respective cars as a function of the different options. Although LM P2 tyres and the materials they employ are not 'confidential', they are designed specifically for the class's prototypes (front: 30/68-18 / rear: 31/71-18 rear).

#### SLICK TYRES

**Soft:** non-abrasive track surfaces

Medium: averagely-abrasive tracks, temperatures between 15 and 35°C **Hard:** for abrasive track surfaces and/or temperatures in excess of 30°C

#### **INTERMEDIATES** TYRES

Damp conditions: 're-cut' slicks

#### RAIN TYRES

A broad operating window for conditions ranging from a damp track to heavy rain



Wet

Re-cut Slick

#### **ENTRY LIST** LM P2

| N°20 | HIGH CLASS RACING - ORECA 07 - GIBSON • ANDERS FJORDBACH / DENNIS ANDERSEN / MATHIAS BECHE                  |          |
|------|---|----------|
| N°22 | UNITED AUTOSPORTS - LIGIER JSP217 - GIBSON • PHILIP HANSON / FILIPE ALBUQUERQUE / PAUL DI RESTA             | MICHELIN |
| N°23 | PANIS BARTHEZ COMPETITION - LIGIER JSP217 - GIBSON • RENÉ BINDER / JULIEN CANAL / WILLIAM STEVENS           |          |
| N°25 | ALGARVE PRO RACING - ORECA 07 - GIBSON • DAVID ZOLLINGER / ANDREA PIZZITOLA / JOHN FALB                     |          |
| N°26 | G-DRIVE RACING - AURUS 01 - GIBSON • ROMAN RUSINOV / JOB VAN UITERT / JEAN-ERIC VERGNE                      |          |
| N°28 | TDS RACING - ORECA 07 - GIBSON • FRANÇOIS PERRODO / MATTHIEU VAXIVIERE / LOÏC DUVAL                         |          |
| N°29 | RACING TEAM NEDERLAND - DALLARA P217 - GIBSON • FRITS VAN EERD / GIEDO VAN DER GARDE / NYCK DE VRIES        | MICHELIN |
| N°30 | DUQUEINE ENGINEERING - ORECA 07 - GIBSON • NICOLAS JAMIN / PIERRE RAGUES / ROMAIN DUMAS                     | MICHELIN |
| N°31 | DRAGONSPEED - ORECA 07 - GIBSON • ROBERTO GONZALEZ / PASTOR MALDONADO / ANTHONY DAVIDSON                    | MICHELIN |
| N°32 | UNITED AUTOSPORTS - LIGIER JSP217 - GIBSON • RYAN CULLEN / ALEX BRUNDLE / WILLIAM OWEN                      | MICHELIN |
| N°34 | INTER EUROPOL COMPETITION - LIGIER JSP217 - GIBSON • JAKUB SMIECHOWSKI / NIGEL MOORE                        | MICHELIN |
| N°36 | SIGNATECH ALPINE MATMUT - ALPINE A470 - GIBSON • NICOLAS LAPIERRE / ANDRÉ NEGRAO / PIERRE THIRIET           | MICHELIN |
| N°37 | JACKIE CHAN DC RACING - ORECA 07 - GIBSON • DAVID HEINEMEIER HANSSON / JORDAN KING / RICKY TAYLOR           |          |
| N°38 | JACKIE CHAN DC RACING - ORECA 07 - GIBSON • HO-PIN TUNG / STÉPHANE RICHELMI / GABRIEL AUBRY                 |          |
| N°39 | GRAFF / ORECA 07 - GIBSON • TRISTAN GOMMENDY / VINCENT CAPILLAIRE / JONATHAN HIRSCHI                        | MICHELIN |
| N°43 | RLR M SPORT/TOWER EVENTS - ORECA 07 - GIBSON • JOHN FARANO / ARJUN MAINI / NORMAN NATO                      |          |
| N°47 | CETILAR R. VILLORBA CORSE - DALLARA P217 - GIBSON • ROBERTO LACORTE / GIORGIO SERNAGIOTTO / ANDREA BELICCHI | MICHELIN |
| N°48 | IDEC SPORT - ORECA 07 - GIBSON • PAUL LAFARGUE / PAUL-LOUP CHATIN / MEMO ROJAS                              | MICHELIN |
| N°49 | ARC BRATISLAVA - LIGIER JSP217 - GIBSON • MIROSLAV KONOPKA / HENNING ENQVIST / KONSTANTIN TERESCHENKO       |          |
| N°50 | LARBRE COMPETITON - LIGIER JSP217 - GIBSON • ERWIN CREED / ROMANO RICCI / NICHOLAS BOULLE                   | MICHELIN |











## LM GTE PRO

## LM GTE AM

## LM GTE PRO AND LM GTE AM

## **TYRES**

Michelin's LM GTE Pro range was completely overhauled for 2013 with a view to improving longevity and obtaining a broader operating window for each type of compound. This development work continued every season until 2018.

#### **SLICK TYRES**

**Soft:** temperatures less than 20°C (e.g. at night at Le Mans). The soft slick delivers the same stability and consistency as the medium slick

**Medium:** core range tyre, temperatures between 15 and 35°C

Hard: for abrasive track surfaces and/or temperatures in excess of 30°C

#### RAIN TYRES

**'Drying' Wet and Full Wet:** a broad operating window and the same tread pattern, but a different construction







#### *LE MANS 24 HOURS TYRE SIZES*

| SLICK<br>Soft - Medium - Hard | RE-CUT<br>SLICK | FULL WET        |
|-------------------------------|-----------------|-----------------|
| Front: 30/68-18               | Front: 30/68-18 | Front: 30/68-18 |
| Rear: 31/71-18                | Rear: 31/71-18  | Rear: 31/71-18  |

WIDTH (CM) / EXTERIOR DIAMETER (CM) X INTERIOR DIAMETER (INCHES).

#### **TYRE QUOTAS**

| Free practice, qualifying, warm-up | Race            |
|------------------------------------|-----------------|
| <b>32</b> tyres                    | <b>60</b> tyres |

#### WET TRACK

| Drying Wet | Full Wet |
|------------|----------|

### ENTRY LIST LM GTE PRO

| N°51 | AF CORSE - FERRARI 488 GTE EVO • ALESSANDRO PIER GUIDI / JAMES CALADO / DANIEL SERRA            | MICHELIN |
|------|---|----------|
| N°63 | CORVETTE RACING - CHEVROLET CORVETTE C7.R • JAN MAGNUSSEN / ANTONIO GARCIA / MIKE ROCKENFELLER  | MICHELIN |
| N°64 | CORVETTE RACING - CHEVROLET CORVETTE C7.R • OLIVER GAVIN / TOM MILNER / MARCEL FASSLER          | MICHELIN |
| N°66 | FORD CHIP GANASSI TEAM UK - FORD GT • STEFAN MÜCKE / OLIVIER PLA / BILLY JOHNSON                | MICHELIN |
| N°67 | FORD CHIP GANASSI TEAM UK - FORD GT • ANDY PRIAULX / HARRY TINCKNELL / JONATHAN BOMARITO        | MICHELIN |
| N°68 | FORD CHIP GANASSI TEAM USA - FORD GT • JOEY HAND / DIRK MÜLLER / SÉBASTIEN BOURDAIS             | MICHELIN |
| N°69 | FORD CHIP GANASSI TEAM USA - FORD GT • RYAN BRISCOE / RICHARD WESTBROOK / SCOTT DIXON           | MICHELIN |
| N°71 | AF CORSE - FERRARI 488 GTE EVO • DAVIDE RIGON / SAM BIRD / MIGUEL MOLINA                        | MICHELIN |
| N°81 | BMW TEAM MTEK - BMW M8 GTE • NICKY CATSBURG / MARTIN TOMCZYK / PHILIPP ENG                      | MICHELIN |
| N°82 | BMW TEAM MTEK - BMW M8 GTE • AUGUSTO FARFUS / ANTONIO FELIX DA COSTA / JESSE KROHN              | MICHELIN |
| N°89 | RISI COMPETIZIONE - FERRARI 488 GTE EVO • PIPO DERANI / OLIVER JARVIS / JULES GOUNON            | MICHELIN |
| N°91 | PORSCHE GT TEAM - PORSCHE 911 RSR • RICHARD LIETZ / GIANMARIA BRUNI / FRÉDÉRIC MAKOWIECKI       | MICHELIN |
| N°92 | PORSCHE GT TEAM - PORSCHE 911 RSR • MICHAEL CHRISTENSEN / KEVIN ESTRE / LAURENS VANTHOOR        | MICHELIN |
| N°93 | PORSCHE GT TEAM - PORSCHE 911 RSR • PATRICK PILET / EARL BAMBER / NICHOLAS TANDY                | MICHELIN |
| N°94 | PORSCHE GT TEAM - PORSCHE 911 RSR • SVEN MÜLLER / MATHIEU JAMINET / DENNIS OLSEN                | MICHELIN |
| N°95 | ASTON MARTIN RACING - ASTON MARTIN VANTAGE AMR • NICKI THIIM / MARCO SØRENSEN / DARREN TURNER   | MICHELIN |
| N°97 | ASTON MARTIN RACING - ASTON MARTIN VANTAGE AMR • MAXIME MARTIN / ALEXANDER LYNN / JONATHAN ADAM | MICHELIN |
|      | ·   |          |











# LM GTE PRO

### ENTRY LIST LM GTE AM

| N°54 | SPIRIT OF RACE - FERRARI 488 GTE • THOMAS FLOHR / FRANCESCO CASTELLACCI / GIANCARLO FISICHELLA | MICHELIN |
|------|--|----------|
| N°56 | TEAM PROJECT 1 - PORSCHE 911 RSR • JÖRG BERGMEISTER / PATRICK LINDSEY / EGIDIO PERFETTI        | MICHELIN |
| N°57 | CAR GUY RACING - FERRARI 488 GTE • TAKESHI KIMURA / KEL FRANCESCO COZZOLINO / COME LEDOGAR     | MICHELIN |
| N°60 | KESSEL RACING - FERRARI 488 GTE • CLAUDIO SCHIAVONI / SERGIO PIANEZZOLA / ANDREA PICCINI       | MICHELIN |
| N°61 | CLEARWATER RACING - FERRARI 488 GTE • LUIS PEREZ COMPANC / MATTHEW GRIFFIN / MATTEO CRESSONI   | MICHELIN |
| N°62 | WEATHERTECH RACING - FERRARI 488 GTE • COOPER MACNEIL / TONI VILANDER / ROBERT SMITH           | MICHELIN |
| N°70 | MR RACING - FERRARI 488 GTE • MOTOAKI ISHIKAWA / OLIVIER BERETTA / EDWARD CHEEVER              | MICHELIN |
| N°77 | DEMPSEY-PROTON RACING - PORSCHE 911 RSR • MATT CAMPBELL / CHRISTIAN RIED / JULIEN ANDLAUER     | MICHELIN |
| N°78 | PROTON COMPETITION - PORSCHE 911 RSR • LOUIS PRETTE / PHILIPPE PRETTE / VINCENT ABRIL          | MICHELIN |
| N°83 | KESSEL RACING - FERRARI 488 GTE • MANUELA GOSTNER / RAHEL FREY / MICHELLE GATTING              | MICHELIN |
| N°84 | JMW MOTORSPORT - FERRARI 488 GTE • EFFREY SEGAL / RODRIGO BAPTISTA / WEL LU                    | MICHELIN |
| N°85 | KEATING MOTORSPORTS - FORD GT • BEN KEATING / JEROEN BLEEKEMOLEN / FELIPE FRAGA                | MICHELIN |
| N°86 | GULF RACING - PORSCHE 911 RSR • MICHAEL WAINWRIGHT / BENJAMIN BARKER / THOMAS PREINING         | MICHELIN |
| N°88 | DEMPSEY-PROTON RACING - PORSCHE 911 RSR • SATOSHI HOSHINO / GIORGIO RODA / MATTEO CAIROLI      | MICHELIN |
| N°90 | TF SPORT - ASTON MARTIN VANTAGE • SALIH YOLUC / EUAN HANKEY / CHARLES EASTWOOD                 | MICHELIN |
| N°98 | ASTON MARTIN RACING - ASTON MARTIN VANTAGE • PAUL DALLA LANA / PEDRO LAMY / MATHIAS LAUDA      | MICHELIN |
| N°99 | DEMPSEY-PROTON RACING - PORSCHE 911 RSR • PATRICK LONG / TRACY KROHN / NICLAS JÖNSSON          | MICHELIN |
|      |  |          |

# FIA WEC TYRE REGULATIONS

#### SLICK TYRES

Non-hybrid LM P1 and LM P2 cars: 3 types of slick for the season for all the cars / 2 types of slick to be nominated 48 hours before the Prologue test / 2 types of slick for each race (from the above 3) to be nominated 48 hours before the start of scrutineering (3 types of slick for Le Mans).

## LM GTE Pro and LM GTE Am: 3 types of slick per model for the season / 2 types of

3 types of slick per model for the season / 2 types of slick to be nominated 48 hours before the Prologue test / 1 additional type of slick can be registered in the course of the season / 2 types of slick for each race (from the above 3) to be nominated 48 hours before the start of scrutineering (3 types of slick for Le Mans).

#### RAIN AND INTERMEDIATE TYRES

Can only be used if Race Control declares the track to be wet (free practice, qualifying, race). No quotas per race.

LM P2: 1 type of intermediate tyre and 1 type of rain tyre for the season for all cars entered 48 hours before the Prologue. The re-cutting of tread patterns is not authorised.

LM GTE Am: 1 type of intermediate tyre and 1 type of rain tyre per model entered 48 hours before the Prologue. The re-cutting of tread patterns is not authorised.

In the course of the season, a competitor may change tyre brand no more than once.

**Penalty:** a 3-minute Stop&Go penalty for tyre regulation breaches

A maximum of 4 mechanics and 2 tyre guns for wheel changes during pit stops. Tyre changes may now be carried out while the car is being refuelled.

**1 tyre technician** is authorised to carry out a visual inspection of the tyres and check their pressures.

**Tyre changes** are only authorised a) on the grid up to the three-minute board, b) in front of the car's garage during a pit stop or inside the garage in the case of longer work on the car, c) on the track if the race is suspended.

**Tyres are identified by RFID** chips and bar codes. All tyre serial numbers must be communicated to the Technical Delegates 48 hours in advance.











# THE 2018 LE MANS 24 HOURS LE MANS



### FLASHBACK



Kazuki Nakajima, Fernando Alonso (Toyota TS050 Hybrid/ Michelin), 388 laps at an average speed of 220.10kph



Kazuki Nakajima (Toyota TS050 Hybrid/ Michelin), 3m15.377s (average speed: 251.10kph)



Sébastien Buemi (Toyota TS050/Michelin), 3m17.668s (Lap 5) FIRST
LE MANS
WIN

for Toyota (20<sup>th</sup> participation)

First Le Mans win for two-time F1 World Champion
FERNANDO
ALONSO

Although **PORSCHE** 

did not enter a car in the LMP1 class, it won the LM GTE Pro and LM GTE Am classes with Michelin

#### IN NUMBERS



The number of **consecutive**Michelin wins at Le Mans since 1998 – a record



The number of **spectators** at the circuit



Toyota became Michelin's

10<sup>th</sup> partner to win the
Le Mans 24 Hours



New distance record

(km) for an LM P1 car on the same set of tyres (Jenson Button, 55 laps)



45 of the 60 cars **raced on Michelin tyres** 



**Distance** (km) covered by the winning N°8 Toyota/Michelin (388 laps)



The **two Michelin- equipped** Toyotas traded the lead 25 times



**The total distance** (km) covered by Michelin tyres in the race (13,236 laps)













# MICHELIN AND THE LE MANS 24 HOURS

## MICHELIN'S COMMITMENT

Since the inaugural edition in 1923, the Le Mans 24 Hours has stood out as a unique challenge for drivers, cars and tyres alike. In modern times, it has become an unforgiving, exceptionally complex 24-hour sprint that places the emphasis on lasting performance. Every year, Michelin and its partners prepare meticulously for this classic competition.

The Le Mans 24 Hours is a major event for Michelin, for whom endurance racing is the highlight of its motorsport programme and a chance to showcase the longevity and performance of its tyres.

Having won the race's very first edition in 1923, Michelin is this year targeting its 28th

To stand a chance of winning at Le Mans, tyres need to deliver a blend of high performance (to be able to cope with top speeds in excess of 330kph) and durability (to be able to cover distances in excess of 700km at average speeds of around 220kph), as well as consistency and safety.

The Le Mans 24 Hours permits open competition between tyre companies, while the competing prototypes and GTs improve year on year.

To defend its number one status and unbeaten record since 1998, , Michelin has had to keep pace with these evolutions to the cars' technology, adapt to changes to the regulations and, as a result, renew its range season after season with a view to pushing out the envelope on the safety, longevity, consistency and performance fronts at the same time.

For Michelin, Le Mans doesn't last just 24 hours; it lasts 365 days. As soon as the cars cross the finish line, Michelin Motorsport's engineers start to analyse the tyres and data they collect, and begin thinking about improvements they can make for the following year. Prototype tyres are tested during the autumn, signed off at the start of the year and assigned to the teams at the opening races of each endurance racing season.

This extremely complex and intense race constantly forces Michelin to develop and test new technologies in order to enhance the performance durability, versatility, consistency and grip of its tyres. Thanks to the close working relationship Michelin Motorsport's development teams enjoy with the engineers who work out of the company's Technology Centre, the technological solutions developed for the race feed directly into Michelin road tyres to deliver even higher, more consistent performance.



The total number of Michelin victories at Le Mans, including 21 in a row since 1998



The year of Michelin's first Le Mans 24 Hours victory (inaugural year)



The number of different drivers who have won Le Mans on Michelin rubber (10 different makes)

#### **GREEN GUIDE**

**Explore historical Le Mans,** home of the Plantagenets, its cathedral and its medieval old town with the Michelin Green Guide Pavs de la Loire.





**LOOKING FOR A GOOD** RESTAURANT

# MICHELIN'S WINNING RECORD

- 2018 Buemi/Nakajima/Alonso Toyota TS050 Hybrid
- Bernhard/Hartley/Bamber Porsche 919 Hybrid
- Jani/Lieb/Dumas Porsche 919 Hybrid
- Hulkenberg/Bamber/Tandy Porsche 919 Hybrid
- Tréluyer/Fassler/Lotterer Audi R18 e-tron quattro
- 2013 Kristensen/McNish/Duval Audi R18 e-tron quattro
- 2012 Tréluyer/Fassler/Lotterer Audi R18 e-tron quattro
- Tréluyer/Fassler/Lotterer Audi R18 TDi
- 2010 Dumas/Bernhard/ Rockenfeller Audi R15 TDi
- 2009 Brabham/Gené/Wurz Peugeot 908 HDi FAP
- 2008 Capello/Kristensen/McNish Audi R10 TDi
- 2007 Biela/Pirro/Werner Audi R10 TDi
- 2006 Biela/Pirro/Werner Audi R10 TDi
- 2005 Kristensen/Lehto/Werner Audi R8
- 2004 Kristensen/Ara/Capello Audi R8
- 2003 Kristensen/Capello/Smith Bentley Speed 8
- 2002 Biela/Kristensen/Pirro Audi R8
- 2001 Biela/Kristensen/Pirro Audi R8
- 2000 Biela/Kristensen/Pirro Audi R8
- 1999 Winkelhock/Martini/Dalmas BMW V12 LMR
- 1998 McNish/Aïello/Ortelli Porsche 911 GT1
- 1995 Dalmas/Lehto/Sekiva McLaren F1 GTR
- Brabham/Bouchut/Hélary Peugeot 905
- Warwick/Dalmas/Blundell Peugeot 905 1989 Mass/Dickens/Reuter
- Sauber C9-Mercedes-Benz
- Pironi/Jaussaud Renault-Alpine A442b
- 1923 Lagache/Léonard Chenard & Walcker Sport













# MICHELIN AND THE LE MANS 24 HOURS



## 5.410.713

#### The record race distance

(km) completed by the N°9 Audi R15 TDi/Michelin, in 2010

## 251.88

The average speed (kph) of Kamui Kobayashi (Toyota/Michelin) during his record-breaking lap (3m14.791s) at Le Mans in 2017



#### The number of laps

(equivalent to 750km) completed by Jenson Button (BR1-AER/Michelin) on the same set of Michelin tyres in 2018 - a new LM P1 record



The number of Michelinequipped cars that have finished on the podium at Le Mans since 1923



The number of different 'ingredients' (approximately) that go into every Michelin endurance racing tyre

30

The time (minutes) required to make an LM P1 tyre. Le Mans tyres are made by hand



The number of class wins secured by Michelin-equipped cars since 1923

1,231

The distance record (km) for the same set of Michelin rain tyres on a GT1 car (87 laps, in 2008)



#### The number of times every tyre flexes during

a lap of Le Mans, equivalent to 84,500 flexes during a stint of 13 laps

### LANDMARK DATES

## 1925: MICHELIN WINS INAUGURAL LE MANS

Michelin won the very first edition of the Le Mans 24 Hours with André Lagache and René Leonard driving a Chenard & Walcker, who completed the race at an average speed of more than 90kph round the original 17km circuit.

## <mark>1965:</mark> MICHELIN RETURNS TO LE MANS

Michelin returns to La Sarthe nearly 40 years after its first success. Michelin supplied an Alpine-Renault and a DB/CD.

Michelin innovated with the first radial construction slick tyres at the Le Mans 24 Hours, fitted to an Alpine-Renault A210.

1978: AN ALL-FRENCH VICTORY Victory for Didier Pironi and Jean-Pierre Jaussaud in a Renault-Alpine A442B on Michelin tyres.

**1989:** A MICHELIN ONE-TVVO Michelin takes a one-two finish with the Sauber-Mercedes of Mass/Reuter/Dickens and Baldi/Acheson/Brancatelli.

# OUT THE PODIUM Peugeot and Michelin lock out the podium with the 905

(winners: Brabham/Bouchut/Hélary).

#### A MICHELIN TOP FOUR

Michelin completely dominates the race with a one-two-three-four finish in association with BMW, Toyota and two Audis. It also secures success in the GTS class with Chrysler.

## 2000: FIRST WIN FOR AUDI-MICHELIN

Michelin and its partner Audi score a one-two-three finish at La Sarthe, with the win going to Kristensen/Biela/Pirro.

## <mark>2003:</mark> BENTLEY-MICHELIN, 79 YEARS LATER

Two years after returning to endurance racing, Bentley scores a one-two finish and its fifth overall win, 79 years after the last. Michelin wins in every class.

## <mark>2006:</mark> THE FIRST DIESEL WIN AT LE MANS

Audi achieves success with diesel technology at the Le Mans 24 Hours. Michelin developed specific tyres capable of dealing with the strong forces generated by the Audi R10 TDI prototypes.

**2007: TEN IN A ROW FOR MICHELIN**Michelin takes victory for the tenth consecutive time at the Le
Mans 24 Hours. It's the French manufacturer's 16<sup>th</sup> win at the legendary race.

**2009:** PEUGEOT-MICHELIN: **16 YEARS LATER**Peugeot and Michelin secure a one-two finish at Le Mans, 16 years after their last success together in 1993. Michelin once again wins all four classes and locks out the top 15 positions in the overall standings.

**2010:** ONE-TWO-THREE FOR AUDI-MICHELIN

The three works Audi R15 TDIs monopolise the podium of the 2010 edition, taking the ninth Le Mans victory for the Audi-Michelin partnership. The N°9 Audi sets a new distance record after covering 5,410.71km on just 11 sets of tyres!

AT LE MANS
Michelin celebrates its 20th victory (and its 14th in a row!) at Le Mans, sharing a tenth victory with its partner Audi. The winning N°9 Audi completed five consecutive stints on the same Michelin tyres, and only used nine sets of tyres in total.

**2012:** FIRST LE MANS SUCCESS FOR HYBRID POWER

Michelin secures its 15th straight win at Le Mans with the Audi R18 e-tron quattro. The Michelin-equipped car goes down in history as the first hybrid prototype (diesel/electricity) to win the French race. There is victory for Michelin in the LM GTE Pro days, too with Ferrari Michelin in the LM GTE Pro class, too, with Ferrari

# **2013:** THE 12<sup>TH</sup> VICTORY FOR A MICHELIN-EQUIPPED AUDI AT LE MANS Audi and Mich

Audi and Michelin celebrate their 12th Le Mans success together. Sadly, however, the 90th anniversary edition is marked by the death of Danish driver Allan Simonsen. The N°2 Audi of Tom Kristensen, Allan McNish and Loïc Duval takes the win ahead of the N°3 Toyota and the N°3 Audi. Porsche and Michelin secure a one-two triumph in the LM GTE Pro class.

# **2014:** AUDI-MICHELIN UNBEATEN AT LE MANS SINCE 2010... Although Toyota led for more than half the distance, and

even though Porsche topped the leaderboard to mark its return to Le Mans in the prototype class, the French race was won yet again won by Audi (R18 e-tron quattro/Michelin). Fässler/Tréluyer/Lotterer claimed their third victory.

**2015: PORSCHE-MICHELIN BACK ON TOP AT LE MANS**Seventeen years after their last victory together at the Circuit de la Sarthe, Porsche and Michelin won the 2015 race with the 'third' Hybrid 919 in the hands of Le Mans novices Nico Hülkenberg, Earl Bamber and Nick Tandy. As in 1998, Porsche-Michelin secured the top two places since the Bernhard/Hartley/Webber car was second at the flag. It was Michelin's 2<sup>th</sup> victory at the great French race Michelin's 24th victory at the great French race.

**2016:** A MEMORABLE START AND FINISH!

For the first time, the Le Mans 24 Hours started behind a Safety Car following a heavy shower moments before the start. While leading, the N°5 Toyota suffered a cruel mechanical problem during the race's penultimate lap which handed victory to the N°2 Porsche 919 Hybrid/Michelin of Marc Lieb, Neel Jani and Romain Dumas. Ford celebrated its return to Le Mans with a one-two-three finish in the LM GTF return to Le Mans with a one-two-three finish in the LM GTE Pro class on Michelin tyres.

# **2017:** PORSCHE/MICHELIN WINS BUT TWO LM P2 CARS FINISH ON THE PODIUM

Once again, Toyota came close to winning the Le Mans 24 Hours but glory escaped it one more time. Victory ended up in Porsche's hands for the third year running, while second and third places went to LM P2 prototypes!

**ZOTE:** TOYOTA/MICHELIN'S FIRST LE MANS SUCCESS
Toyota celebrated its 20<sup>th</sup> attempt at the Le Mans 24 Hours with a one-two finish led by the TS050 Hybrid/Michelin of Buemi/Nakajima/Alonso. It was the first Le Mans win for Fig. star Fernando Alonso. Although it wasn't involved in the fight for outright victory, Porsche/Michelin won both the LM GTE Pro and LM GTE Am classes











