

# RACEGUIDE

2022 LE MANS 24 HOURS

24h  
LE MANS



## LE MANS 24 HOURS

ROUND 3 • 2022 FIA WORLD ENDURANCE CHAMPIONSHIP (FIA WEC)

90<sup>th</sup>  
RUNNING

LE MANS  
(FRANCE)



62 ENTRIES

JUNE 11-12



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# THE 2022 LE MANS 24 HOURS

24h  
LE MANS®



*"This year sees the Le Mans 24 Hours revert to its traditional June date, so a huge crowd is sure to be back to enjoy not only the track action, but also the entertainment and concerts laid on by the organizers! And the atmosphere is guaranteed to be buzzing once again as the teams join battle on both the technical and sporting fronts. Our tire range for the Hypercars is almost identical to that which won out of the box in 2021, except that Toyota has opted for different sizes this time around. Alpine has switched from LMP1 to Pilot Sport Hypercar tires, while Glickenhaus revealed how much progress it has made by taking pole for Spa-Francorchamps.*

*"Meanwhile, there's plenty that is new in LMGTE where Michelin has been chosen as the category's sole tire partner every year since 2018, despite the fact that it allows open competition between tire firms. All the cars have their own range of Pilot Sports and our latest covers were developed virtually on the simulator and using CAD technology, in close collaboration with partners like Porsche, Ferrari and Corvette. The LMGTE Pro range includes a new compound for even greater consistency at night, while the mixed conditions we saw at Spa-Francorchamps gave us a chance to evaluate the whole MICHELIN Pilot Sport range ahead of Le Mans where the weather can be just as fickle!"*



**PIERRE ALVES**  
Endurance Racing Program Manager  
Michelin Motorsport

**THE MIXED CONDITIONS  
WE SAW AT SPA-FRANCOR-  
CHAMPS GAVE US A CHANCE  
TO EVALUATE THE WHOLE  
MICHELIN PILOT SPORT RANGE  
AHEAD OF LE MANS**



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# THE CIRCUIT LE MANS 24 HOURS

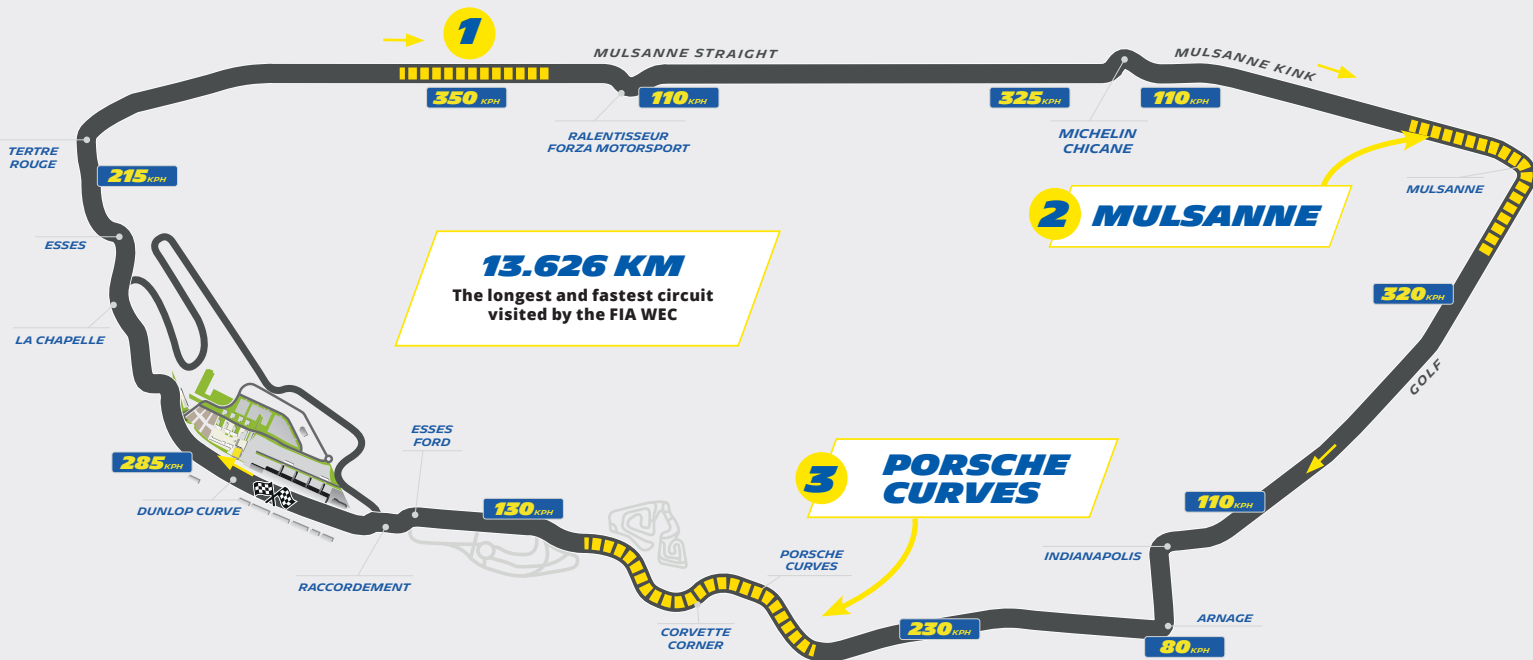
24h  
LE MANS®



Fifteenth different track layout since 1923

38  
TURNS

CLOCKWISE



## FEATURES

A non-permanent circuit: 50 percent of the track is open to ordinary traffic the rest of the year

Cars are slowed along the 5.750km-long Mulsanne Straight by two chicanes



### TRACK LAP RECORD:

Kamui Kobayashi

(Toyota/Michelin)

3min14s791 (in 2017)

### RACE LAP RECORD:

Mike Conway (Toyota/Michelin)

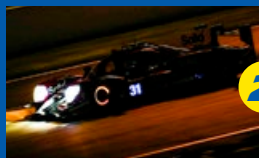
3m17.297s (in 2019)

## FEATURES



1

When the cars reach their top speed of around 350kph, their MICHELIN Pilot Sports become oval in shape as their diameter increases by as much as 5cm. This is countered by the aerodynamic downforce that pushes the tires against the ground



2

The fastest prototypes brake for the Mulsanne Turn from **310kph to 93kph**, shedding 200kph in the space of just 200 meters and four seconds. As a result, their MICHELIN Pilot Sport tires need to dissipate **500 Joules**, the amount of energy required to halt a 38-tonne truck travelling at 50kph



3

Going into the Porsche Curves, the MICHELIN Pilot Sport tires that equip the hypercars are subjected to a **lateral force of 3g** for five seconds at 240kph, equivalent to them being pulled outwards by a mass of 1,200kg



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# TIMETABLE

## 2022 LE MANS 24 HOURS

SUNDAY, JUNE 5	
9:00am-6:00pm	Official Le Mans Test Day
WEDNESDAY, JUNE 8	
9:00am-9:45am	Ligier European Series, Free Practice 1
12:05pm-1:05pm	Road to Le Mans, Free Practice 1
2:00pm-5:00pm	<b>Le Mans 24 Hours</b> , Free Practice 1
5:30pm-6:15pm	Ligier European Series, Free Practice 2
7:00pm-8:00pm	<b>Le Mans 24 Hours</b> , Qualifying
8:30pm - 9:30pm	Road to Le Mans, Free Practice 2
10:00pm-midnight	<b>Le Mans 24 Hours</b> , Free Practice 2
THURSDAY, JUNE 9	
10:15am-10:35am	Ligier European Series, Qualifying 1
10:50am-11:10am	Ligier European Series, Qualifying 2
12:10pm-12:30pm	Road to Le Mans, Qualifying 1
12:45pm-1:45pm	Road to Le Mans, Qualifying 2
3:00pm-6:00pm	<b>Le Mans 24 Hours</b> , Free Practice 3
6:30pm-7:25pm	Road to Le Mans, Race 1
8:00pm-8:30pm	<b>Le Mans 24 Hours</b> , Hyperpole
10:00pm-midnight	<b>Le Mans 24 Hours</b> , Free Practice 4
FRIDAY, JUNE 10	
11:10am-12:00 noon	Ligier European Series, Race 1
5:00pm-7:00pm	Drivers' Parade
SATURDAY, JUNE 11	
9:00am-9:50am	Ligier European Series, Race 2
10:30am-10:45am	<b>Le Mans 24 Hours</b> , Warm-up
11:20am-12:15pm	Road to Le Mans, Race 2
4:00pm	<b>LE MANS 24 HOURS, START</b>

This year is the 90<sup>th</sup> running of the Le Mans 24 Hours which was organized for the first time in 1923

After taking place in September in 2020, and in August last year, the 2022 Le Mans 24 Hours has reverted to its mid-June date

Technical Scrutineering and Documentation takes place in Le Mans city center, as does the Drivers' Parade

Race to start at 4pm (official starter: Patrick Pouyanné)

During pit stops, tires may only be changed once refueling has been completed. Keeping the same set consequently saves time

The six fastest cars in each class in qualifying go on to contest the Hyperpole shootout



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# MICHELIN'S TIRES FOR LE MANS

## MICHELIN PILOT SPORT

### SLICKS

**Soft cold:** for non-abrasive track surfaces, low temperatures (less than 15°C) or at night.

**Soft hot:** for average-wearing or 'rubbered' track surfaces, temperatures in excess of 15°C (core range tyre).

**Medium:** abrasive track surfaces, demanding track configurations, temperatures in excess of 30°C.

### INTERMEDIATES

Treaded tires for damp conditions or when the conditions differ at different parts of the circuit.

### WET-WEATHER TIRES

Tires for light to heavy rain.

## HYPERCAR



**SLICKS**  
"SOFT COLD" / "SOFT HOT"  
MEDIUM



**INTERMEDIATE**



**WET**  
FULL WET

### LE MANS 24 HOURS TIRE SIZES

SLICK SOFT COLD, SOFT HOT, MEDIUM	INTERMEDIATE	FULL WET
Alpine (front + rear) : 31/71-18		
Glickenhause + Toyota : Front: 29/71-18 Rear: 34/71-18		

width (cm) / exterior diameter (cm) x interior diameter (inches).

### TIRE QUOTAS

Free practice, qualifying, warm-up	Hyperpole	Race
24 tires (6 sets)	8 tires	56 tires

### WET TRACK

Intermediate	Wet	Full Wet

## HYPERCARS PARTNERS

N°7	TOYOTA GAZOO RACING	Toyota GR010 Hybrid	CONWAY/KOBAYASHI/LOPEZ	
N°8	TOYOTA GAZOO RACING	Toyota GR010 Hybrid	BUEMI/HARTLEY/HIRAKAWA	
N°36	ALPINE ELF MATMUT	Alpine A480-Gibson	NEGRAO/LAPIERRE/VAXIVIÈRE	
N°708	GLICKENHAUS RACING	Glickenhause 007 LMH	PLA/DUMAS/DERANI	
N°709	GLICKENHAUS RACING	Glickenhause 007 LMH	BRISCOE/WESTBROOK/MAILLEUX	

### MICHELIN STATISTIC

Michelin has won Le Mans every year (24 times) since 1998 with cars that straddle seven different generations of prototype (GT1, LMP, LMP900, LMGTp, LMP1, LMP1-H, Hypercar). This list underlines Michelin's ability to respond to changing technical regulations and technologies in order to deliver competitive, durable tires.



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# MICHELIN'S TIRES FOR LE MANS

**LM GTE PRO**

**LM GTE AM**

## MICHELIN PILOT SPORT

### SLICKS

**Soft cold:** 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.

**Soft hot:** core range tyre, temperatures between 15 and 35°C.

**Medium:** for abrasive track surfaces and/or temperatures in excess of 30°C.

### RAIN TIRES

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



### TIRE SIZES

SLICK Soft cold, Soft hot, Medium	DRYING WET	FULL WET
Front: 30/68-18 • Rear: 31/71-18		

Width (cm) / exterior diameter (cm) x interior diameter (inches).

### TIRE QUOTAS

Free practice, qualifying, warm-up	Hyperpole	Race
28 tires (7 sets)	8 tires	60 tires

### WET TRACK

Drying wet	Full Wet

## FIA WEC TIRE REGULATIONS

### SLICK TIRES

#### HYPERCARS:

Three 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:

Three 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 TIRES

Can only be used if Race Control declares the track to be wet (free practice, qualifying, race).

No quotas per race.

The re-cutting of tread patterns is not authorised.

During the course of the season, a competitor may change tire brand no more than once.

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

**A maximum of 4 mechanics and 2 tire guns** for wheel changes during pit stops. A car's tires may only be changed once it has been refuelled.

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

**Tire 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.

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



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# THE 2022 LE MANS 24 HOURS
























**LM GTE PRO**

**LM GTE AM**

## LM GTE PRO **PARTNERS**

<b>N°51</b>	<b>AF CORSE</b>	Ferrari 488 GTE Evo	<b>PIER GUIDI/CALADO/SERRA</b>	
<b>N°52</b>	<b>AF CORSE</b>	Ferrari 488 GTE Evo	<b>MOLINA/FUOCO/ RIGON</b>	
<b>N°63</b>	<b>CORVETTE RACING</b>	Corvette C8.R	<b>GARCIA/TAYLOR/CATSBURG</b>	
<b>N°64</b>	<b>CORVETTE RACING</b>	Corvette C8.R	<b>MILNER/TANDY/SIMS</b>	
<b>N°74</b>	<b>RILEY MOTORSPORTS</b>	Ferrari 488 GTE Evo	<b>FRAGA/BIRD/VAN GISBERGEN</b>	
<b>N°91</b>	<b>PORSCHE GT TEAM</b>	Porsche 911 RSR-19	<b>BRUNI/LIETZ/MAKOWIECKI</b>	
<b>N°92</b>	<b>PORSCHE GT TEAM</b>	Porsche 911 RSR-19	<b>CHRISTENSEN/ESTRE/VANTHOOR</b>	

## LM GTE AM **PARTNERS**

<b>N°21</b>	<b>AF CORSE</b>	Ferrari 488 GTE Evo	<b>MANN/ULRICH/VILANDER</b>	
<b>N°33</b>	<b>TF SPORT</b>	Aston Martin Vantage AMR	<b>KEATING/CHAVES/SORENSEN</b>	
<b>N°46</b>	<b>TEAM PROJECT 1</b>	Porsche 911 RSR-19	<b>CAIROLI/PEDERSEN/LEUTWILER</b>	
<b>N°54</b>	<b>AF CORSE</b>	Ferrari 488 GTE Evo	<b>FLOHR/CASTELLACCI/CASSIDY</b>	
<b>N°55</b>	<b>SPIRIT OF RACE</b>	Ferrari 488 GTE Evo	<b>CAMERON/GRIFFIN/PEREL</b>	
<b>N°56</b>	<b>TEAM PROJECT 1</b>	Porsche 911 RSR-19	<b>IRIBE/MILLROY/BARNICOAT</b>	
<b>N°57</b>	<b>KESSEL RACING</b>	Ferrari 488 GTE Evo	<b>KIMURA/SCHANDORFF/JENSEN</b>	
<b>N°59</b>	<b>INCEPTION RACING</b>	Ferrari 488 GTE Evo	<b>WEST/LEDOGAR/KELIN</b>	
<b>N°60</b>	<b>IRON LYNX</b>	Ferrari 488 GTE Evo	<b>SCHIAVONI/BALZAN/GIAMMARRIA</b>	
<b>N°61</b>	<b>AF CORSE</b>	Ferrari 488 GTE Evo	<b>PRETTE/GRUNEWALD/ABRIL</b>	
<b>N°66</b>	<b>JMW MOTORSPORT</b>	Ferrari 488 GTE Evo	<b>VAN DER ZANDE/KWAMME/HART</b>	
<b>N°71</b>	<b>SPIRIT OF RACE</b>	Ferrari 488 GTE Evo	<b>DEZOTEUX/RAGUES/AUBRY</b>	
<b>N°75</b>	<b>IRON LYNX</b>	Ferrari 488 GTE Evo	<b>EHRET/HOOK/VARRONE</b>	
<b>N°77</b>	<b>DEMPSEY-PROTON RACING</b>	Porsche 911 RSR-19	<b>RIED/PRIAULX/TINCKNELL</b>	
<b>N°79</b>	<b>WEATHERTECH RACING</b>	Porsche 911 RSR-19	<b>MACNEIL/ANDLAUER/GIRAUDI</b>	
<b>N°80</b>	<b>IRON LYNX</b>	Ferrari 488 GTE Evo	<b>CRESSONI/FISICHELLA/HEINSTAND</b>	
<b>N°85</b>	<b>IRON DAMES</b>	Ferrari 488 GTE Evo	<b>FREY/GATTING/BOVY</b>	
<b>N°86</b>	<b>GR RACING</b>	Porsche 911 RSR-19	<b>WAINWRIGHT/PERA/BARKER</b>	
<b>N°88</b>	<b>DEMPSEY-PROTON RACING</b>	Porsche 911 RSR-19	<b>POORDAD/LINDSEY/HEYLEN</b>	
<b>N°93</b>	<b>PROTON COMPETITION</b>	Porsche 911 RSR-19	<b>FASSBENDER/CAMPBELL/ROBICHON</b>	
<b>N°98</b>	<b>NORTHWEST AMR</b>	Aston Martin Vantage AMR	<b>DALLA LANA/PITTARD/THIIM</b>	
<b>N°99</b>	<b>HARDPOINT MOTORSPORT</b>	Porsche 911 RSR-19	<b>HARYANTO/PICARIELLO/RUMP</b>	
<b>N°777</b>	<b>D'STATION RACING</b>	Aston Martin Vantage AMR H	<b>HOSHINO/FUJII/FAGG</b>	



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# LE MANS 24 HOURS 2021 RESULTS

24h  
LE MANS



## WINNERS:

**Conway/Kobayashi/Lopez**  
(Toyota GR010 Hybrid/Michelin),  
371 laps (5,054.50km) at an  
average speed of 210.5kph



## POLE POSITION

**Kamui Kobayashi**  
(Toyota GR010 Hybrid/  
Michelin), 3m23.900s  
(240.6kph)



## TOP SPEED:

**Kamui Kobayashi**  
(Toyota GR010 Hybrid/  
Michelin), 339.1kph

## FASTEST RACE LAP:

**Brendon Hartley**  
(Toyota GR010 Hybrid/  
Michelin),  
3m27.607s  
(236.3kph)

Michelin's 24<sup>th</sup>  
consecutive Le Mans  
victory since 1998

Victory for Toyota  
first time out at Le  
Mans with its new  
GR010 Hybrid Hypercar  
prototype

Michelin's specific new  
Pilot Sport tires for the  
Hypercar class were  
developed in less than  
a year

Success for Ferrari and  
Michelin in LMGTE Pro  
and LMGTE Am












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

## FIA WORLD ENDURANCE HYPERCAR CHAMPIONSHIP

HYPERCAR MANUFACTURERS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	ALPINE		39	18					57
2 <sup>nd</sup>	TOYOTA		27	25					52
3 <sup>rd</sup>	GLICKENHAUS		23	16					39













  

HYPERCAR DRIVERS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	ANDRÉ NEGRÃO		39	18					57
1 <sup>st</sup>	MATTHIEU VAXIVIERE		39	18					57
1 <sup>st</sup>	NICOLAS LAPIERRE		39	18					57
2 <sup>nd</sup>	OLIVIER PLA		23	16					39
2 <sup>nd</sup>	ROMAIN DUMAS		23	16					39
3 <sup>rd</sup>	BRENDON HARTLEY		27	0					27
3 <sup>rd</sup>	RYO HIRAKAWA		27	0					27
3 <sup>rd</sup>	SÉBASTIEN BUEMI		27	0					27

## LMGTE FIA WORLD ENDURANCE CHAMPIONSHIP

LMGTE MANUFACTURERS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	PORSCHE		62	29					91
2 <sup>nd</sup>	FERRARI		33	40					73
3 <sup>rd</sup>	CHEVROLET		27	12					39

LMGTE DRIVERS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	KEVIN ESTRE		39	18					57
1 <sup>st</sup>	MICHAEL CHRISTENSEN		39	18					57
2 <sup>nd</sup>	ALESSANDRO PIER GUIDI		18	25					43
2 <sup>nd</sup>	JAMES CALADO		18	25					43
3 <sup>rd</sup>	NICK TANDY		27	12					39
3 <sup>rd</sup>	TOMMY MILNER		27	12					39

## FIA ENDURANCE TROPHY - LMGTE AM

LMGTE AM TEAMS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	NORTHWEST AMR		38	15					53
2 <sup>nd</sup>	TF SPORT		28	18					47
3 <sup>rd</sup>	DEMPSEY - PROTON RACING		18	25					43

LMGTE AM DRIVERS			 18/03	 7/05	 11-12/07	 10/07	 11/09	 12/11	TOTAL
1 <sup>st</sup>	DAVID PITTARD		38	15					53
1 <sup>st</sup>	NICKI THIIM		38	15					53
1 <sup>st</sup>	PAUL DALLA LANA		38	15					53
2 <sup>nd</sup>	BEN KEATING		28	19					47
2 <sup>nd</sup>	FLORIAN LATORRE		28	19					47
2 <sup>nd</sup>	MARCO SØRENSEN		28	19					47
3 <sup>rd</sup>	CHRISTIAN RIED		18	25					43
3 <sup>rd</sup>	HARRY TINCKNELL		18	25					43
3 <sup>rd</sup>	SEBASTIAN PRIAULX		18	25					43

# MICHELIN

## AND THE LE MANS 24 HOURS

24h  
LE MANS®



### MICHELIN LE MANS ANNIVERSARIES

#### 30 YEARS AGO...



The 1992 race saw Michelin secure its fourth Le Mans 24 Hours victory, and its first with Peugeot. The Peugeot 905 of Warwick/Dalmas/Blundell took the spoils ahead of the #33 Toyota TS010 and the Peugeot 905/Michelin of Baldi/Alliot/Jabouille.

#### 20 YEARS AGO...



Michelin and its partner Audi celebrated their third straight Le Mans win together by monopolizing 2002's top-three with the R8 prototype. The Audi/Michelin crews on the podium were Biella/Kristensen/Pirro, Herbert/Pescatori/Capello and Werner/Krumm/Peter.

#### 10 YEARS AGO...



The 2012 Le Mans 24 Hours marked the first international win of an electric-hybrid prototype. The successful Michelin-equipped Audi R18 e-tron quattro of 'youngsters' Fassler/Tréluyer/Lotterer was first past the flag, ahead of the similar car of experienced campaigners McNish/Capello/Kristensen.

### MICHELIN LE MANS HIGHLIGHTS

#### 1923: MICHELIN CLAIMS INAUGURAL LE MANS 24 HOURS



ON May 26, 1923, a field of 33 cars set off in pouring rain to contest the very first Le Mans 24

Hours, known at the time as the Grand Prix d'Endurance de 24 Heures. The race featured a 17-kilometre dirt circuit and produced a one-two finish for Chenard & Walcker/Michelin, led by the Lagache/Léonard car which averaged 92kph. Only three cars failed to finish.

#### 2010: NEW DISTANCE RECORD

The 2010 Le Mans 24 Hours saw Michelin and Audi establish a new distance record at Le Mans, with Rockenfeller/Dumas/Bernhard's Audi R15 TDI completing 5,410.713km (397 laps). The former record (5,335km) dated back to 1971 when the circuit layout was much faster. Michelin also holds the LMP2, LMGTE Pro and Am distance records.

#### 2011: A DECISIVE FIFTH STINT CLINCHES 2011 WIN BY 13 SECONDS!

In 2011, the N°2 Audi R18 TDI/Michelin won Le Mans by a margin of just 13.854 seconds after Benoît Tréluyer chose to go out for a fifth stint on the same set of tires following the car's final pit stop. The 30 or so seconds saved by not changing his Michelins allowed the Frenchman to shrug off the late pressure applied by a trio of charging Peugeot 908 HDIs to the finish line!



#### 2017: NEW AVERAGE-SPEED RECORD



Japan's Kamui Kobayashi established a new record for Le Mans when qualifying his Toyota TS050 Hybrid/Michelin for the 2017 race. His pole-winning time of 3m14.791s equated to an average speed of 251.88kph, making it the fastest lap ever clocked in La Sarthe. The previous record dated back to 1985 (251.81kph). The 2017 race also saw Michelin post new lap records in LMP2, LMGTE Pro and LMGTE Am.

#### 2018: MORE THAN TWO F1 GRANDS PRIX ON THE SAME FOUR TIRES



In 2018, the 2009 F1 world champion Jenson Button covered 55 laps (750km) at an average speed of more than 220kph on the same set of Michelin tires in his BR1-AER LMP1 prototype. That's equivalent to contesting more than two F1 grands prix without changing tires. Button posted the fastest lap of his quintuple stint (average speed: 242kph) 30th time around, 400km into his landmark run.

#### 24 CONSECUTIVE WINS - A RECORD

Michelin holds the record for the longest unbroken winning spell at Le Mans (24 victories since 1998). In the course of this ongoing run, the French manufacturer has had to adapt its range frequently as a function of shifting technical regulations and technologies employed by the successive cars. The record for the highest number of Le Mans wins is currently held by Dunlop (34), ahead of Michelin (30) and Goodyear (14).



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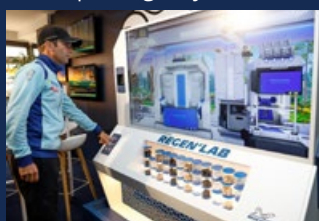
## MICHELIN'S LONGSTANDING COMMITMENT TO LE MANS

**Michelin sees endurance racing - and the Le Mans 24 Hours in particular - as a high-tech laboratory where it can showcase the lasting performance of its tires while innovating in the field of sustainable mobility.**

In 2021, Michelin scored its 24th straight Le Mans win since 1998. To remain unbeaten that long, it has had to provide its partners with increasingly competitive tires that are not only durable, but also consistent and versatile, while corresponding with its stance on the environment.

By exclusively using CAD and simulator technology to design the MICHELIN Pilot Sports that triumphed in the first race of the exciting new Hypercar era last June, Michelin succeeded in slashing its development time and reducing the quantity of raw materials necessary for the process by 75 percent. For this year, it switched

its focus to providing the LMGTE teams with brand new MICHELIN Pilot Sports which were similarly designed and developed digitally.



The longevity of Michelin's tires has long enabled its partners to run double, triple and even quadruple stints with a view to saving time during pit stops, with no detriment to performance. This, too, has contributed to reducing its environmental footprint at Le Mans over the years. For example, Audi used just 11 sets of tires on its way to winning the 2010 race.

As a further illustration of how sustainability is central to Michelin's approach to motor racing, no fewer than 46

percent of the raw materials that go into the rear tires it makes for motorcycle racing's FIM MotoE™ World Cup already come from recycled or biosourced sources.

Last year, Michelin presented an endurance racing tire containing exactly the same proportion of sustainable raw materials for the Mission24-run hydrogen-fueled electric H24 prototype. Via its subsidiaries Symbio et Michelin, Groupe Michelin is an active partner of this project which recently took a major step towards its objective of competing at Le Mans by 2025 when the car made its race debut at Imola, Italy.

For Michelin, racing - and more especially Le Mans - will always serve as a formidable platform for the development and testing of new technologies that favor sustainable mobility.



**Michelin victories**



**podium finishes**



**pole positions**

### MICHELIN GREEN GUIDES

Discover the countless delights France has to offer, from the Loire Valley chateaux, Paris and the French Riviera to Brittany, the Alps and innumerable other attractions with the Michelin Green Guide collection.



### LE MANS AND THE LE MANS REGION

- Le Mans is the capital of France's Sarthe department and has a population of approximately 150,000
- Le Mans Old Town is historically associated with the Plantagenets
- Le Mans sits at the confluence of the Sarthe and Huisne rivers
- Places to visit in and around Le Mans include Epau Abbey, Saint Julien's Cathedral, les Quinconces des Jacobins, the Old Town and the Tessé Museum
- The Le Mans region is within striking distance of many famous Loire Valley Châteaux, like Chenonceau, Chambord, Blois, Amboise, Azay-le-Rideau, etc.



**MICHELIN'S  
WINNING RECORD**

<b>2021</b>	<b>Conway/Kobayashi/Lopez</b> Toyota GR010 HYBRID
<b>2020</b>	<b>Nakajima/Buemi/Hartley</b> Toyota TS050 Hybrid
<b>2019</b>	<b>Nakajima/Buemi/Alonso</b> Toyota TS050 Hybrid
<b>2018</b>	<b>Buemi/Nakajima/Alonso</b> Toyota TS050 Hybrid
<b>2017</b>	<b>Bernhard/Hartley/Bamber</b> Porsche 919 Hybrid
<b>2016</b>	<b>Jani/Lieb/Dumas</b> Porsche 919 Hybrid
<b>2015</b>	<b>Hulkenberg/Bamber/Tandy</b> Porsche 919 Hybrid
<b>2014</b>	<b>Tréluyer/Fassler/Lotterer</b> Audi R18 e-tron quattro
<b>2013</b>	<b>Kristensen/McNish/Duval</b> Audi R18 e-tron quattro
<b>2012</b>	<b>Tréluyer/Fassler/Lotterer</b> Audi R18 e-tron quattro
<b>2011</b>	<b>Tréluyer/Fassler/Lotterer</b> Audi R18 TDi
<b>2010</b>	<b>Dumas/Bernhard/Rockenfeller</b> Audi R15 TDi
<b>2009</b>	<b>Brabham/Gené/Wurz</b> Peugeot 908 HDi FAP
<b>2008</b>	<b>Capello/Kristensen/McNish</b> Audi R10 TDi
<b>2007</b>	<b>Biela/Pirro/Werner</b> Audi R10 TDi
<b>2006</b>	<b>Biela/Pirro/Werner</b> Audi R10 TDi
<b>2005</b>	<b>Kristensen/Lehto/Werner</b> Audi R8
<b>2004</b>	<b>Kristensen/Ara/Capello</b> Audi R8
<b>2003</b>	<b>Kristensen/Capello/Smith</b> Bentley Speed 8
<b>2002</b>	<b>Biela/Kristensen/Pirro</b> Audi R8
<b>2001</b>	<b>Biela/Kristensen/Pirro</b> Audi R8
<b>2000</b>	<b>Biela/Kristensen/Pirro</b> Audi R8
<b>1999</b>	<b>Winkelhock/Martini/Dalmas</b> BMW V12 LMR
<b>1998</b>	<b>McNish/Aiello/Ortelli</b> Porsche 911 GT1
<b>1995</b>	<b>Dalmas/Lehto/Sekiya</b> McLaren F1 GTR
<b>1993</b>	<b>Brabham/Bouchut/Hélary</b> Peugeot 905
<b>1992</b>	<b>Warwick/Dalmas/Blundell</b> Peugeot 905
<b>1989</b>	<b>Mass/Dickens/Reuter</b> Sauber C9-Mercedes-Benz
<b>1978</b>	<b>Pironi/Jaussaud</b> Renault-Alpine A442b
<b>1973</b>	<b>Lagache/Léonard</b> Chenard & Walcker Sport



## MICHELIN RECORDS AT LE MANS



### 24

The highest number of consecutive wins

### 98

The number of years separating Michelin's first and most recent Le Mans wins

### 251.88KPH

Fastest ever average lap speed

### 5,410.713KM

Distance record over 24 hours

### 225.22KPH

Highest average speed over 24 hours

### 54

The highest number of cars to contest Le Mans on Michelin rubber (2020)

### 8

The highest number of Le Mans wins with the same driver (Tom Kristensen)

### 5

The highest number of wins with the same car (Audi R8)

### 15

The highest number of overall places at the finish monopolized by cars equipped by the same tire manufacture

### 31

The highest number of pole positions

## MICHELIN AND LE MANS LANDMARK DATES

### 1923: MICHELIN WINS INAUGURAL LE MANS

Michelin wins the very first edition of the Le Mans 24 Hours with André Lagache and René Léonard driving a Chenard & Walcker. They completed the race at an average speed of more than 92kph around the original 17-kilometre circuit.

### 1951: MICHELIN RETURNS TO LE MANS

Michelin returns to Le Mans with radials for a Lancia Aurélia B20GT. In addition to topping its class, the car came 12th overall after completing 3,000km on the same set of tires.

### 1978: AN ALL-FRENCH VICTORY

Victory for Didier Pironi and Jean-Pierre Jaussaud in a Renault-Alpine A442B on Michelin tires.

### 1989: A MICHELIN ONE-TWO

Michelin takes a one-two finish with the Sauber-Mercedes of Mass/Reuter/Dickens and Baldi/Acheson/Brancatelli.

### 1993: MICHELIN LOCKS OUT THE PODIUM

Peugeot and Michelin monopolized the podium with the 905 (winners: Brabham/Bouchut/Hélary).

### 1999: A MICHELIN TOP-FOUR

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

### 2000: FIRST WIN FOR AUDI-MICHELIN

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

### 2003: 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 tops every class.

### 2006: THE FIRST DIESEL WIN AT LE MANS

Audi achieves success with diesel technology at Le Mans on Michelin tires developed specifically to deal with the high forces generated by the R10 TDI prototypes.

### 2007: TEN IN A ROW FOR MICHELIN

Michelin takes victory for the tenth consecutive year at Le Mans. It's the French manufacturer's 16th 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 lock out the podium to notch up a 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 tires!

### 2011: 20TH MICHELIN VICTORY AT LE MANS

Michelin celebrates its 20th victory (its 14th in a row) at Le Mans and shares a tenth success with its partner Audi. The winning N°9 Audi completes five consecutive stints on the same Michelin tires.

### 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. First Le Mans appearance for the Michelin Hybrid, a slick intermediate tire.

### 2015: PORSCHE-MICHELIN BACK ON TOP

Seventeen years after their last victory together at the Circuit de la Sarthe, Porsche and Michelin win the 2015 race with the 'third' Hybrid 919 in the hands of Le Mans novices Nico Hülkenberg, Earl Bamber and Nick Tandy. It is Michelin's 24th victory at the famous French race.

### 2016: A MEMORABLE START AND FINISH!

For the first time, the Le Mans 24 Hours starts behind a Safety Car following a heavy shower moments before the start. While leading, the N°5 Toyota suffers a cruel mechanical problem during the race's penultimate lap which hands victory to the N°2 Porsche 919 Hybrid/Michelin of Marc Lieb, Neel Jani and Romain Dumas.

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

Once again, Toyota comes close to winning the Le Mans 24 Hours but glory escapes it yet again. Victory ends up in Porsche's hands for the third year running, while second and third places go to LM P2 prototypes.

### 2018: TOYOTA/MICHELIN'S FIRST LE MANS SUCCESS

Toyota celebrates its 20th attempt at the Le Mans 24 Hours with a one-two finish for the TS050 Hybrid/Michelin. First Le Mans win for F1 star Fernando Alonso.

### 2019: A MICHELIN GRAND SLAM

Michelin wins all four classes (LMP1, LMP2, LMGT Pro, LMGT Am) for the first time since 2010.

### 2020: NO SPECTATORS

Toyota and Michelin make it three wins in a row in front of empty grandstands due to the Covid-19 pandemic. Another grand-slam performance for Michelin whose partners top all for classes.

### 2021: MICHELIN'S 24TH STRAIGHT WIN

Michelin extends its unbeaten run at Le Mans to 24 victories since 1998. Its brand new tires for the Hypercar entries help Toyota and its GR010 Hybrid claim the first race of the race's Hypercar era.

# MICHELIN'S LE MANS LOGISTICS

Approximately 7,000 MICHELIN Pilot Sports are available for the 35 Michelin-equipped cars entered for this year's Le Mans Test Day and race. Around 800 tires are trucked to the track ahead of the Test Day. They are then taken back to Clermont-Ferrand where stocks are replenished by a further 800 or so covers on the Tuesday of race week. This plan optimizes logistical costs and reduces our environmental impact.



## MICHELIN'S FACILITIES AT LE MANS

Tires taken to the circuit: approximately  
**7,000**

**1,700sq.m**  
Workshop space: 800 square meters  
Storage space: 900 square meters

**35**  
35 of the 62 cars entered on Michelin tires

**54** Fitting staff  
**30** Technicians and engineers



**200**

Some 200 different components are required to make the 20 semi-finished assemblies necessary for the manufacture of each MICHELIN Pilot Sport

**30 MINUTES**

MICHELIN Pilot Sport tires are made by hand. The process takes around 30 minutes, plus a further 20 minutes for them to be cured at 180°C

**6,500**

Each MICHELIN Pilot Sport rotates 6,500 times during a single lap of Le Mans

**130°C**

The running temperature of a MICHELIN Pilot Sport slick can reach as high as 130°C

**350KPH**

At 350kph, the diameter a MICHELIN Pilot Sport tire increases by 5cm

**6CM**

MICHELIN Pilot Sport slicks undergo a lateral deformation of 6cm through the Porsche Curves

**100**

A MICHELIN Pilot Sport can withstand a mass of 100 times its own weight, equivalent to a family hatchback like the Toyota Yaris

**120 LITERS**

At 200kph, MICHELIN Pilot Sport rain tires can clear 120 liters of water every second. That equates to 240,000 liters per lap of Le Mans and the contents of an Olympic swimming pool over an 11-lap stint

**1231 KM**

In 2008, a set of MICHELIN Pilot Sport rain tires completed 1,231km on an Aston Martin Vantage



#LeMans24 #PerformanceMadeToLast #MichelinLeMans24





## **A NEW RACING TYRE THAT CONTAINS 53 PERCENT SUSTAINABLE RAW MATERIALS**

For 2022, Michelin has set itself a new challenge with the presentation of a tyre that contains 53 percent sustainable raw materials.

This ultra-high-performance tyre is further proof of Michelin's ability to continuously integrate an increasingly higher proportion of sustainable materials into products conceived to withstand extreme conditions in motor racing without compromising in any way on performance or adversely affecting the manufacturer's environmental impact.

Michelin has already outlined its ambition for all of its tyres to be 100 percent sustainable by 2050. The aim is for the first stage of this objective to be achieved by 2030, when the plan is for all of the Group's products to be made from 40 percent sustainable raw materials, in line with the Michelin In Motion plan.

In accelerating the introduction of sustainable innovations, Michelin Motorsport is in fact ahead of the Group's timetable for 2030 – as evidenced by this new tyre made up of 53 percent sustainable materials.

### **WHAT ARE SUSTAINABLE MATERIALS?**

Michelin considers sustainable materials to be either recycled or bio-sourced raw materials that are renewable over the scale of a human lifetime and which do not come into competition with the food industry. Examples:

#### **RECYCLED MATERIALS:**

*Styrene regenerated from waste polystyrene (yoghurt pots, food trays, packaging etc.), textiles regenerated from PET waste (Polyethylene Terephthalate, i.e. plastic bottles, dispensers etc.), carbon black recycled from end-of-life tires.*

#### **RENEWABLE BIO-SOURCED MATERIALS:**

*Natural rubber from a responsible supply chain, butadiene (or bio-butadiene), products made from bio-mass (plant waste).*



*Motorsport plays a vital role  
in accelerating the development  
of sustainable solutions aimed at  
making mobility increasingly  
safer, cleaner, more efficient  
and accessible to all*



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