



PORSCHE

Press Release

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LMP1 preview Le Mans 24-Hours

Porsche LMP Team faces hard fight for the overall victory

Stuttgart. The countdown for the season highlight is almost at an end: Over 17th/18th June, Porsche will again fight for the crown jewels of endurance motor-sports in attempting to win the 24 Hours of Le Mans for a third consecutive year. The toughest competition on track is Toyota. The Japanese manufacturer has yet to win Le Mans. In 2016, Toyota retired in a dramatic finish just minutes before the end of the race with a technical failure and in 2017 competes with three cars against the two Porsche 919 Hybrid in the top LMP1-H class.

Five overall winners in Porsche driver squad:

Behind the wheel of the Porsche 919 Hybrid with start number 1 Neel Jani (33/CH), André Lotterer (35/DE) and Nick Tandy (32/GB) will alternate. The three drivers share a combined experience of 20 Le Mans starts and five overall victories. Jani (8 starts, 1 overall victory) is the only Le Mans title defender and reigning FIA World Endurance Champion in 2017 and is also the qualifying lap record-holder at Le Mans since 2015. Lotterer (8 starts, 3 overall victories) faces his first Le Mans race with Porsche after a successful career at Audi. For the second time, Tandy competes in the LMP1 class at the Sarthe. He raced there three times in GT and celebrated Porsche's 17th overall victory as an LMP1 rookie in 2015.

The crew of the sister car – Earl Bamber (26/NZ), Timo Bernhard (36/DE) and Brendon Hartley (27/NZ) – shares a total of 17 Le Mans participations and two overall victories. Bamber (2 starts, 1 overall victory) won in 2015 together with Tandy when he

too was an LMP1 rookie. In 2016, he competed for Porsche in the GT-class. The most experienced of the trio is Bernhard: He has started Le Mans ten times, the first time in 2002 for Porsche in the GT-category – scoring a class victory on his debut. Since 2010, his name is also engraved on the trophy for an overall victory, when the Porsche works driver was loaned to Audi. Hartley (5 starts) has shared a cockpit with Bernhard since 2014 and is arguably the hungriest of them all: the big win at Le Mans has so far eluded him.

The duel against the clock, against the elements and against Toyota:

"Le Mans 2017 is going to be an extremely hard race, maybe even faster than 2016", Fritz Enzinger says in full awareness of the great contest. The Vice President LMP1 confirms: "This will not be a duel against Toyota alone. The toughest challenge at Le Mans is the race itself. You must not ever lose the respect for those 5000 kilometers covered day and night in changeable weather conditions and at speeds in excess of 330km/h while constantly overtaking and lapping competitors. There is no guarantee, things can happen at any moment. You only have a chance of winning the big trophy at Le Mans by fully preparing in advance, work flawlessly and then have an incident-free race."

Team Principal Andreas Seidl adds: "It is not just the sheer race distance that makes Le Mans the most difficult race in the world. You must pace yourself and manage resources during the entire event. It lasts over two weeks and during this time a workforce of 90 men work closely together in limited space and under great tension. They experience highs and lows together. That said on Saturday at 3pm, every single team member – whether mechanic, driver or anyone in the team – needs to be physically and mentally fresh for the race. That's when it counts to execute all what we have learnt and practiced. We have done everything we could to be technically, and on the operational side, prepared for Le Mans. The Porsche 919 Hybrid, our strong driver line-up and the team are ready to give it everything."

The Porsche 919 Hybrid:

The Porsche 919 Hybrid has been widely reworked for the 2017 championship. 60 to 70 per cent of the Le Mans prototype's components are new developments. This especially concerns the areas of aerodynamics, chassis and combustion engine. However, the power train in principle remains the same. The innovative hybrid race car develops a system power of around 900 HP (662 kW) that comes from a compact two-litre turbo charged V4-cylinder (nearly 500 PS/368 kW) and two different energy recovery systems – brake energy from the front axle combined with exhaust energy. The combustion engine drives the rear axle while the electro motor boosts the front axle with an output of more than 400 PS (294 kW). The electrical energy that comes from the front brakes and the exhaust system is temporarily stored in a liquid-cooled lithium ion battery.

The World Championship:

The 24-hour race is the third of nine rounds of the 2017 FIA World Endurance Championship. After the first two six-hour races (Silverstone and Spa), Porsche has scored 61 points and ranks second in the constructors' standings behind Toyota (69.5). In the drivers' standings Bamber/Bernhard/Hartley (33 points) are in second place with Jani/Lotterer/Tandy ranked third (28 points). The leading Toyota duo has 50 points.

The story of success:

Back in 1970, Porsche managed its first and long awaited overall race win at Le Mans. Until 1998 there were 15 more of that to follow, but then Porsche refrained from competing in the top category for 15 years and only scored some class wins. In 2011, Porsche decided to return with a prototype. The World Endurance Championship's new efficiency regulations offered exactly what Porsche always was seeking in top level motorsports: a platform for research and development of future technologies for road cars.

2012 and '13 were dedicated to preparation. New buildings appeared at the Porsche

R&D centre in Weissach near Stuttgart. Fritz Enzinger assembled a team that now numbers 260 highly qualified employees. The first Porsche 919 Hybrid was born – an entirely new car featuring hybrid technologies that were relatively previously unknown. The early days were difficult but the progress was significant.

2014 became the debut season of what remains today the most innovative race car in the world. At its first Le Mans attempt, 20 hours into the race, a 919 Hybrid took the lead but retired two hours later with an engine failure. In 2015, Porsche entered a third 919 Hybrid for Earl Bamber (NZ), Nico Hülkenberg (DE) and Nick Tandy (GB) and it was this trio of LMP1 rookies who took the 17th overall Le Mans win for Porsche – the first since 1998. Porsche repeated the overall race win last year courtesy of Romain Dumas (FR), Neel Jani (CH) and Marc Lieb (DE) after battling with Toyota for many hours.

Schedule for the Porsche LMP Team:

The technical inspection of the 60 racing cars, which are subdivided into four classes, begins on the Sunday before the race, June 11, at the Place de la République. It is a public event in the city centre. The scrutineers examine the cars while the 180 drivers must present their paperwork. The Porsche LMP Team is scheduled for this inspection on Sunday from 3:20 pm onwards.

Tuesday, June 13:

2:00-2:50 pm Porsche Team photograph on start/finish

5:00-6:30 pm Autograph session in the pit lane

Wednesday, June 14:

1:30-2:00 pm “Meet the Team” for media in the Team and Media Hospitality

4:00-8:00 pm Free practice

10:00 pm-midnight Qualifying

Thursday, June 15:

4:30-5:00 pm “Meet the Team” for media in the Team and Media Hospitality

7:00-9:00 pm Qualifying

10:00 pm-midnight Qualifying

Friday, June 16:

10:00 am - 6:00 pm Pit walk

2:00-2:40 pm Porsche press conference in the Porsche Experience Center

2:40-3:30 pm “Meet the Team” in the Porsche Experience Center

5:30-7:30 pm Driver parade in the downtown area

Saturday, June 17:

09:00-09:45 Warm-up

2:22 pm Beginning of race start ceremony

3:00 pm Start of race

TV and live stream:

The Le Mans 24-Hours can be followed on various international TV channels all around the world. Detailed information for all individual countries is available at <https://newsroom.lemans.org/24-heures-du-mans-en/> (click on “TV Distribution” in the download section).

Porsche websites: www.porsche.com/lemans offers a 24-hours web special with the live onboard cameras from the works cars’ cockpits. Additionally, the video stream offers interesting telemetry information about the current car conditions. Furthermore the website includes a live ticker and live standings as well as images and videos from the Le Mans race action.

Facebook: On Saturday at 3pm the race start is broadcasted live from onboard the best placed 919 Hybrid at www.facebook.com/porsche

App: The official WEC App can be downloaded free of charge with an extended (not free of charge) version available which includes full ACO live streaming and full timing of the Le Mans 24-Hours. The live stream is voiced and includes live interviews.

Facts and figures:

- Since 2015 Neel Jani has held the qualifying lap record on the current track lay-out (13.629 km). Shortly after 10:00 pm in Wednesday's qualifying that year, he achieved a lap time of 3:16.887 minutes with his 919 Hybrid. The average speed was 249.2 km/h.
- The fastest qualifying lap ever was driven by Hans-Joachim Stuck in 1985 in a Porsche 962 C in 3:14.800 minutes (average speed 251.815 km/h). Chicane were installed in 1990 to break up the long Mulsanne straight. On the current track, a lap time of under 3:14.843 minutes would be necessary to break Stuck's record.
- The fastest overall lap time, during what has so far been 84 events, was set by Jackie Oliver on the test day in 1971. Back then the track length was 13.469 km and he achieved a 3:13.6 minutes (average speed 250.457 km/h) in his Porsche 917. The same year, he achieved the fastest race lap in 3:18.4 minutes (average speed 244.387 km/h).
- In 2016, Porsche managed the 15th front row lock-out at Le Mans when Neel Jani took the 18th Le Mans pole position for Porsche (3:19.733 minutes) with Timo Bernhard qualifying second (3:20.203 minutes).
- The longest race distance was covered by Timo Bernhard/Romain Dumas/Mike Rockenfeller in 2010 in their overall victory for Audi, a total of 5,410.713 km (397 laps, average speed 225.228 km/h).
- The race distance covered by the winning Porsche 919 Hybrid in 2015 was 5,382.82 km (395 laps, average speed 224.2 km/h). In 2016, the winning Porsche covered 5,233.54 km (384 laps, average speed 216.4 km/h).
- The highest top speed with a 919 in the 2016 race was done by Brendon Hartley – 333.9 km/h down the Mulsanne straight on lap 50. The longest accelera-

tion phase is after Tertre Rouge onto Mulsanne straight and measures 1,940 metres.

- The toughest braking zone is at the end of Mulsanne straight when the drivers decelerate 200 km/h in only 190 metres.
- The Circuit de 24 Heures features 21 corners (9 lefthanders, 12 righthanders).
- The fastest of them are the Porsche Curves where the 919 Hybrid drivers go through at 245 km/h.
- For the tightest corner, Arnage, the drivers slow down to 85 km/h.
- 9.2 km of the 13.6 km lap are normally public roads.
- In qualifying (Wednesday and Thursday until midnight), all 180 drivers must run at least five laps in the dark.
- The 2017 Le Mans night is one of the shortest of the year: the sun sets on Saturday at 10:00 pm, and it rises again on Sunday at 6:00 am.
- In normal racing mode, the Porsche 919 Hybrid must refuel every 14 laps (maximum) and about 30 times during the race.
- The maximum amount of fuel it may consume per lap (13.629 km) is 4.3 litres. The maximum amount of electrical energy from the recovery systems that it is allowed to use is 8 megajoules (2.22 kilowatt hours).
- Refuelling and wheel changing may only be made sequentially, not at the same time. Only four mechanics may work simultaneously when wheel changing, using one wheel gun only. That takes a lot longer than, for example, in Formula One.
- Drivers are normally only changed when new tyres are needed. At night they do quadruple stints which means a drive time of over three hours in a row.
- During the race, each driver must get behind the wheel for a minimum of six hours in total. No driver may drive for more than four hours within a six-hour period. No driver may drive for more than 14 of the 24 hours.
- Due to the length of the circuit, there are three safety cars at Le Mans.
- The equipment taken to the track includes a spare chassis, four combustion engines, four front gearboxes, four rear gearboxes, six front and six rear sections, 60 rims and over 100 radios and headsets.

- Different types of tyres can be used: three compounds of slick tyres for dry conditions, a hybrid tyre (no profile either but softer cover) for mixed conditions and wet weather tyres.
- At Le Mans more than 260,000 spectators and around 1,400 media representatives (print, photographers, TV and online media) are expected.

All scores: <http://www.fiawec.com/courses/classification.html>

All results: <http://fiawec.alkamelsystems.com>

Note: At <https://presse.porsche.de> text, image and video material on the LMP1 programme is freely accessible. The link <https://presskit.porsche.de/motorsport/en/mediaguide/index.html> takes you straight to the Porsche Motorsport Media Guide. The LMP1 twitter feed @Porsche_Team broadcasts information, photos and video material live from the race track. Further live features from the races are available at www.porsche.com/fiawec. For further press content, please visit the Newsroom at www.newsroom.porsche.com. Video news is available at www.vimeo.com/porschenewsroom.