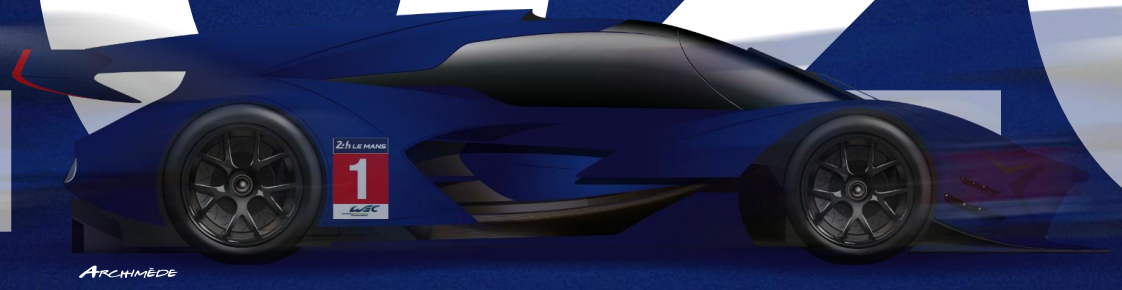
24h LE MANS | WEC FIA WORLD ENDURANCE CHAMPIONSHIP

REGULATIONS 2020



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2020 / 2025 Regulations explanation

BY ACO / FIA WEC

Hyper Sport Endurance Racing

In September 2020, the new 2020-2025 regulations for the top class in endurance racing will introduce into competition sleek, high performance hybrid cars, with much more reasonable budgets.

2020-2025 REGULATIONS

Three elements

Three elements serve as the foundation of the 2020-2025 regulations, ushering in a new era of endurance racing and its top class. The FIA and the ACO have developed them as follows :

These are hyper sport regulations

The regulations are still aimed at developing environment-friendly technology for the future

The regulations ensure realistic budgets accessible to as many competitors as possible

2020-2025 REGULATIONS

The Spirit of the Regulations in images

Richard Mille

FIA ENDURANCE COMMISSION PRESIDENT

Pierre Fillon

ACO PRESIDENT

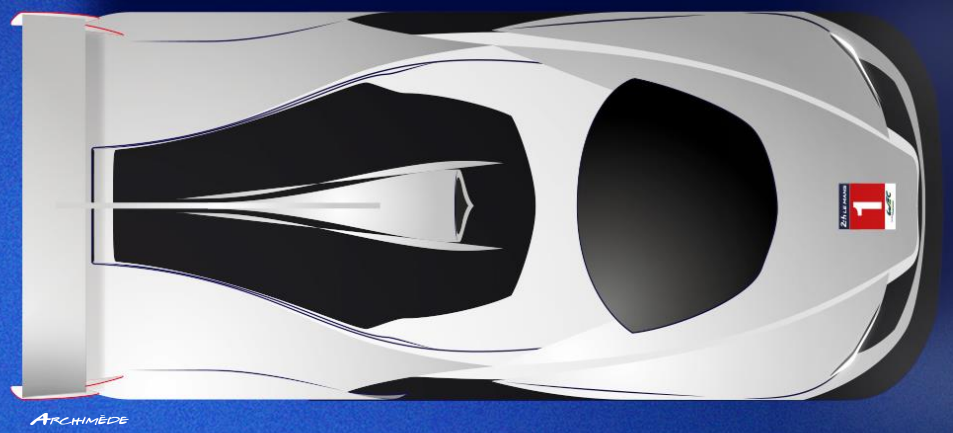
Gerard Neveu

WEC CEO

The Cars in the Top Class

These cars turn the heads of experts and newcomers alike. They stand out in a crowd and are an asset for manufacturers looking to make their mark in endurance racing. Hypercars are extreme prototypes or derived from limited edition chassis. They are fielded by constructors and private teams and embody ultra-sportiness, competition, speed, adrenaline, passion, an outrageousness that excites or, at the very least, leaves no one indifferent.

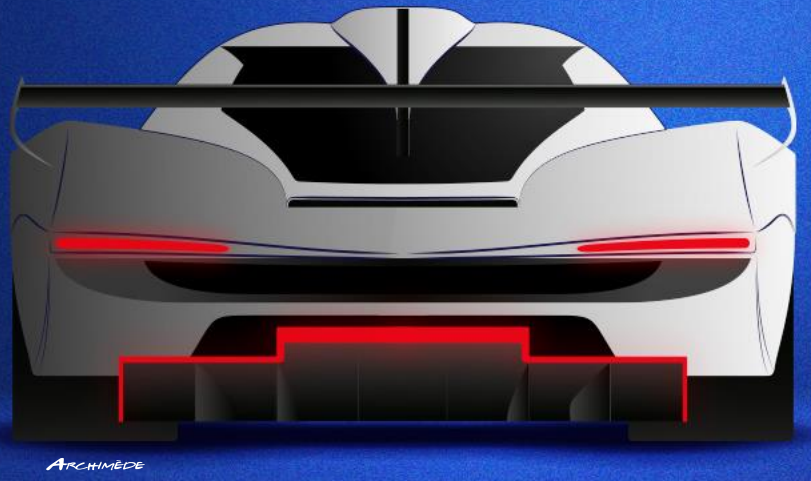
The Cars in the Top Class



For both constructors and spectators, they are instantly recognizable by marque as well. On the track, fans and teams alike will immediately know THEIR car. The design of the hypercars is spectacular and stunning. The regulations cover aerodynamic development, with the lines of the cars now more than ever a function of the aesthetics than ever. The cars' allure is thus guaranteed with performance levels safeguarded despite aerodynamic "restrictions," with a performance goal of 03:22.00 during qualifying at the Le Mans circuit and 03:27.00 for the race.

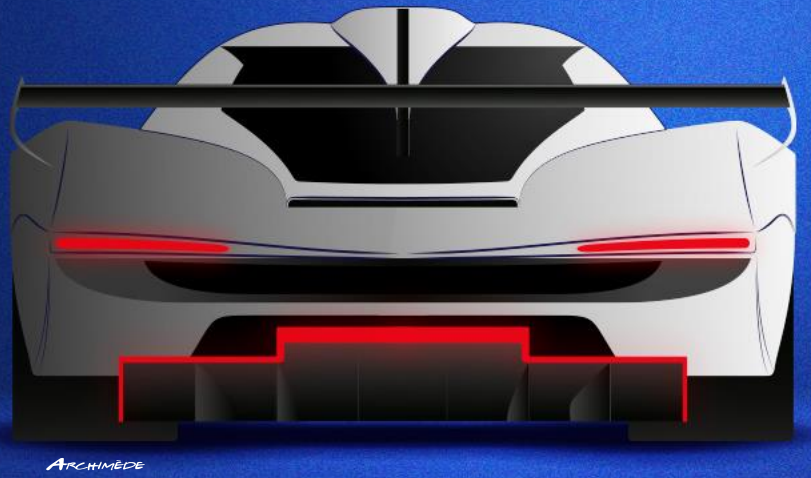
Hybrid systems

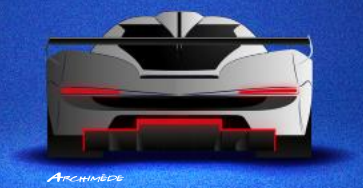
Endurance racing is a technological testing ground for transportation that has less-impact on and is more respectful of the environment. As such, the top class remains hybrid in 2020-2025. All competitors will field hybrid cars with systems they have already developed themselves, or that they have rented from a hybrid system supplier for 3 million euros (running cost for two cars over a season) for private teams. In fact, every constructor which develops its own hybrid system has the option of making it available to private teams for 3 million euros.



Hybrid systems

The years of racing development of hybrid systems since introduction in 2012 will allow designated budgets to decrease significantly. From tens of millions needed during the first years of research, now more reasonable budgets are possible. Racing allows this democratization and standardization of technologies.





There will be only one hybrid system, on the front axle, set to generate 200 kW. The minimum weight of the battery is to be 70 kg, and the motor 50 kg. This easily-achievable specification does not require expensive development.

The thermal engine will generate 520 kW, with a minimum weight of 180 kg. A specific consumption amount will be defined to limit expensive developmental costs on the engine.

The minimum weight of the car is fixed at 1,040 kg. Aerodynamic efficiency is controlled by the regulations and is framed to avoid any additional expense. This efficiency will be test measured in a wind tunnel at full scale during homologation.

How Much Will It Cost to Race?

The objective

What is the objective of these regulations? To allow teams to compete in the top class and be competitive with a budget set at 20 million euros for two cars over a full FIA WEC season, based on a five-year investment and commitment.

Regulations

The technical regulations as they are defined will ensure that performance is less contingent on budget. Efficiency goals have been established to assess the budget.

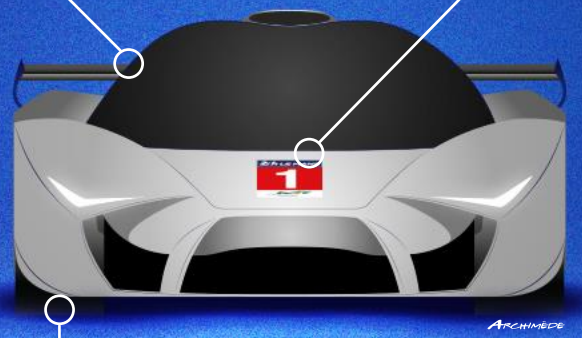
The approval

Among the various measures taken to oversee team budgets, homologation of the cars is valid for five years. There will be no need for a new car every year. Changes will be allowed within a restricted and regulated framework. The option will be given to a manufacturer to have one new car approved over the period of five years in order to meet the marketing expectations of marques.

How Much Will It Cost to Race?

Testing sessions during the season will be limited and significantly decreased from the current regulations. Personnel (technical staff who work on the car) is not to exceed 40 people for two cars. While competing outside Europe, they will only have access to the cars during events in order to limit testing and expenses during that time, allowing teams to manage their budgets and human resources more optimally.

There will be a very restricted developmental window for aerodynamics.



Engines and hybrid systems will no longer use rare materials and they will be limited in number per year.

There will only be one tyre manufacturer. Three specifications of 'slick/dry' and two of 'wet' tyres will be available to all.

Hyper Competition

To ensure competitiveness, narrow any eventual gaps and especially avoid extreme development budgets, the principle of "success ballast" has been selected. Weight is added according to the number of points earned in the championship.

Therefore, 0.5 kg will be added to the car per marked point, not to exceed 50 kg. The car retains the weight during the season up until the 24 Hours of Le Mans when the entire "success ballast" is removed for the finale of the World Endurance Championship season.

Anonymous

This new category appears to be a deluxe Super GT class for the wealthy. Is that a fair assessment ?

Vincent Beaumesnil
ACO SPORT DIRECTOR

The 2020 LMP1 class will remain a category for ultra-high-performance prototypes bidding to win a major world championship and the 24 Hours of Le Mans. The current spirit of great marques battling it out on the track will still be there, but they will be working to much smaller budgets and facing opponents from the private sphere capable of stealing the limelight. The regulations should encourage manufacturers to produce cars that resemble road vehicles. Body shape will not be dictated by aerodynamics (which will be strictly regulated) but by the marque's distinctive design features.

Manufacturers may nonetheless extrapolate a street-legal version of their racing car if they wish. The prototypes will therefore be a lot closer to the hypercars seen out on the road.

Anonymous

What will be the purpose of the LMP1 class ? Will it continue to demonstrate new technology ?

Vincent Beaumesnil
ACO SPORT DIRECTOR

Yes, of course. The cars will still be hybrids. Where it gets interesting is that, now, we are looking to promote cost-efficient technology. Gone are the days when money was no object. LMP1 will therefore be a more realistic technology demonstrator that meets market demands and keeps the green edge of hybrid systems.

Anonymous

Isn't this performance window system just another BOP ?

Vincent Beaumesnil
ACO SPORT DIRECTOR

No, it's not. Balance of Performance is a system that was drawn up so that very different models of cars could race each other in the LMGTE class. The six manufacturers currently involved field competitive cars despite the marked differences between the street-legal versions on which they are based.

The 2020 LMP1s are prototypes built according to technical regulations. These regulations are designed to curb expenditure while guaranteeing a high level of performance and closely-fought competition, and to give private teams a real chance of winning.

ERS, engine and aero performance levels are all governed by values (such as aerodynamic efficiency, specific fuel consumption and power output). While this is already the case with the current LMP1s and the hybrid system energy level (8 megajoules per lap), the 2020 regulations will go a step further. When manufacturers reach the limit values, they will realise there is no point in spending more money on developing their car.

The aim is not therefore to balance the performance of the cars in relation to each other, but to curb the "development at any cost" strategy that saw budgets rocket with the previous generation of cars. So, no, it is not BOP.

Anonymous

What will be the spur for privateers to challenge the manufacturers ?

Vincent Beaumesnil
ACO SPORT DIRECTOR

The performance windows set for the aerodynamics, engine and hybrid systems will level the playing field. The direct impact is that a team's ingenuity, know-how and overall approach will make a greater difference than the depth of its pockets.