

24 Hours of Le Mans 2014

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Find all the news about the group and download the online version of the press pack at www.oreca.fr

« Has ORECA's presence at this 2014 edition of the 24 Hours of Le Mans ever been this major? After celebrating its 40th anniversary, the Group continues to move forward with its four branches of activity, all well represented in La Sarthe. During an entire week – a little more actually – each one of our collaborators will live and work at the rhythm of the most famous twice-around the clock race in the world.

« There is not shortage of challenges, notably for our Technology branch. With no fewer than eight chassis and the debut of the ORECA 03R, we are ambitious in the LM P2 class. We are attempting to provide the best tool to our customer teams, and it's with them that we hope to claim our first success at Le Mans as a constructor. Our engine department is also heavily involved, powering seven of the eight entries. Finally, on REBELLION Racing's behalf, we designed and built the new REBELLION R-One, which will race against Audi, Porsche and Toyota in LM P1.

« There is also Toyota, to which we bring operational support to the manufacturer's two TS040 HYBRID entries looking to improve on the podium finish from last year. Furthermore, we work closely with Toyota for events and merchandising.

« ORECA, as « Le Mans addict » as ever, will take on these 24 Hours of Le Mans as it does motor sports everyday, in 360°. This is only logical for « The Motorsport Company » when you understand what passion the 24 Hours of Le Mans provokes.

SUMMARY

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By David Flourey, ORECA Technology Director

ORECA 03R

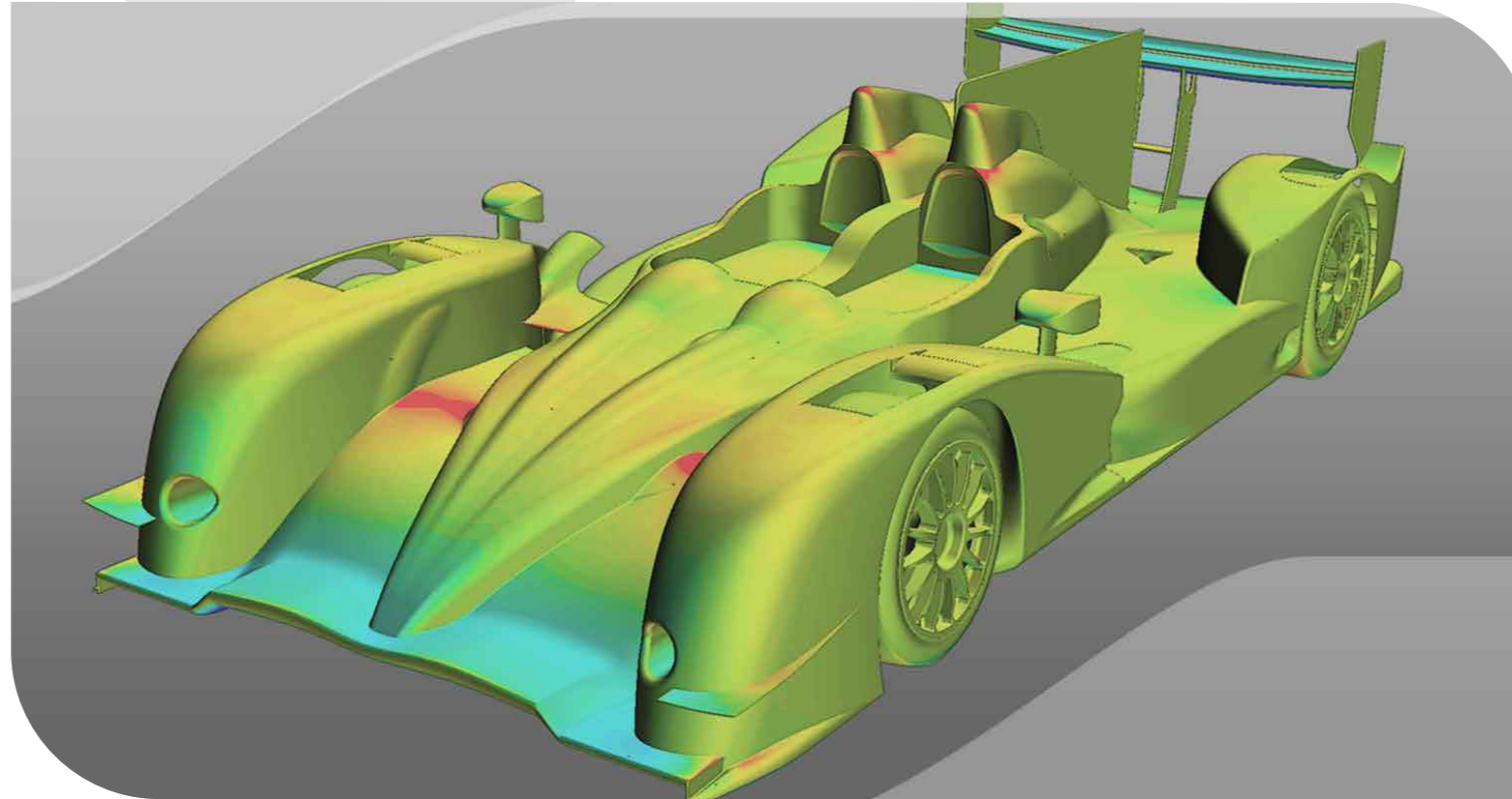
« The ORECA 03 has proven itself and the mechanical base is reliable. With the ORECA 03R, we logically and essentially brought forth aerodynamic evolution, according to the LM P2 regulations, which remains cost conscious for teams. The clear goal is to take the next step in terms of performance according to the specific characteristics of the 24 Hours of Le Mans circuit, while remaining true to the spirit of the category. »

The Look

« The ORECA 03R benefits from a new homologation, which includes a Le Mans kit. This means a modification to the front bodywork, with new front wheel covers. The rear has also evolved with new rear bodywork. These new features take into account the new rules introduced after the base concept of the car and its original homologation, such as the openings above the wheels. Overall, our goal was to improve the aerodynamics of the car. There are also finer details, not all directly visible. The front area will not be raced after Le Mans, but the rear bodywork will be used. »

The Objective

« With 18 wins in three seasons, the ORECA 03 has won at almost every circuit. However, it never won at the 24 Hours of Le Mans even though it clearly had the potential. The pole positions prove this, as does its reliability. The ORECA 03R, which takes into account the return of customer teams, has this objective to win. The teams hold the cards.»



The Support

« Our customer team support department was optimised to offer better collaboration with these teams. For three seasons now, we win races through them and we are proud to work with these ORECA representatives in LM P2. Our role is to bring the best equipment and the most complete support possible, both with our collaborators who all have field experience, and with our engine technicians. »

The Competition

« We know that our adversaries are very high quality. That's one of the strengths of the LM P2 class, with different constructors and, generally, good racing battles. This year is a little different with new closed prototypes with a few unknowns, in terms of performance and reliability. In any case, a perfect race will be needed to win such is the competition this year. We have focused on an evolution of a known base, while some of our competition is racing with an all-new car. It will be an interesting game.»



Chassis

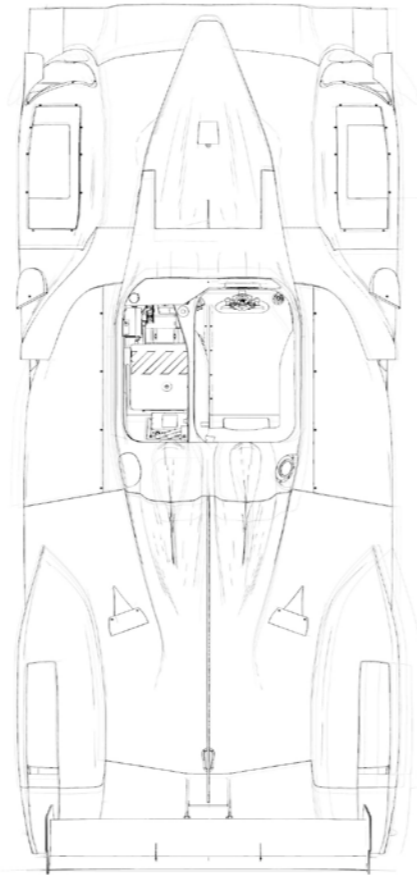
Carbon and honeycomb construction
 Length : 4600 mm
 Width : 1990 mm
 Height : 1025 mm
 Front overhang : 1670 mm
 Rear overhang : 1650 mm
 Wheelbase : 2870 mm
 Weight : 900 kg

Engine

Power : approx. 460 HP
 Torque : approx. 40 Kg.m
 Max RPM : engine dependent
 Lubrification : Dry casing / staged oil pump
 Electronic management system : engine specific
 Suspension : Double wishbone
 Teams choice of tyres Front: 30-65/R18 , Rear : 31-71/R18
 Front wheels : 12,5"x18"
 Rear wheels : 13"x18"

Gearbox

Brand : Xtrac
 Type : Transversal magnesium casing
 Gear change : Steering wheel paddle shift / Pneumatic input Megaline OEM2
 Number of gears : 6 + reverse



Brakes

Ventilated carbon discs
 Brand : Brembo
 Front discs : Brembo 380 mm x37 diameter
 Front calipers : Brembo monobloc 6 pistons
 Front pads : Brembo
 Rear discs : Brembo 355 mm x37 diameter
 Rear calipers : Brembo monobloc 6 pistons
 Rear pads : Brembo

Safety

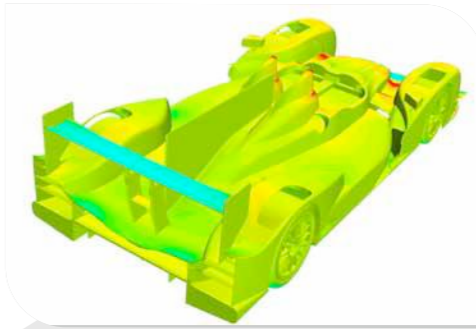
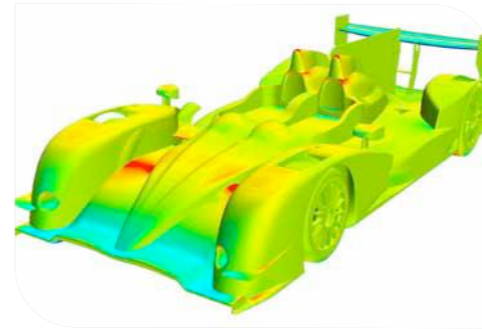
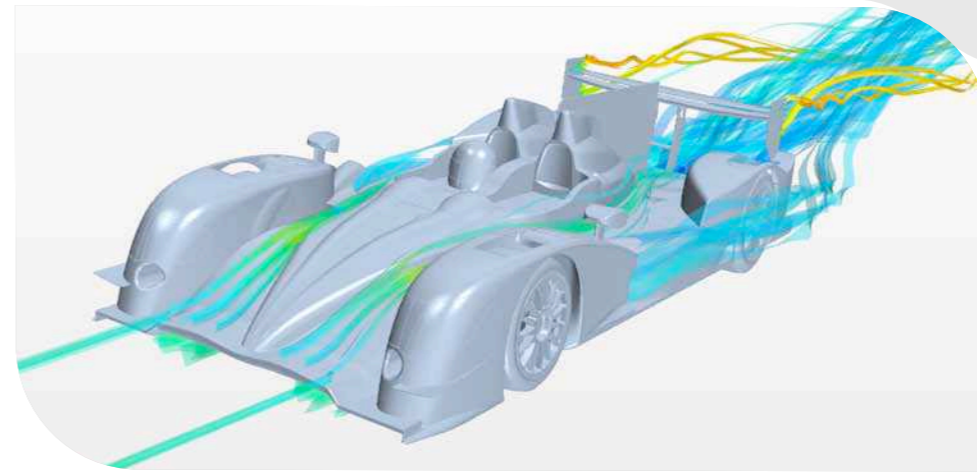
Six-point safety harness adapted to HANS device
 Secured 75 litre fuel bladder
 with integrated reserve system

Bodywork

Carbon/kevlar

Accepted to race in

24 Hours of Le Mans
 FIA World Endurance Championship
 European Le Mans Series
 United SportsCar Championship
 Asian Le Mans Series



Millennium Racing

#22 Fabien Giroix
Oliver Turvey
John Martin

Sébastien Loeb Racing

#24 René Rast
Jan Charouz
Vincent Capillaire

SMP Racing

#27 Anton Ladygin
Sergey Zlobin
Mika Salo

Race Performance

#34 Michel Frey
Franck Mailleux
John Lancaster

Signatech-Alpine

#36 Paul-Loup Chatin
Nelson Panciatici
Oliver Webb

SMP Racing

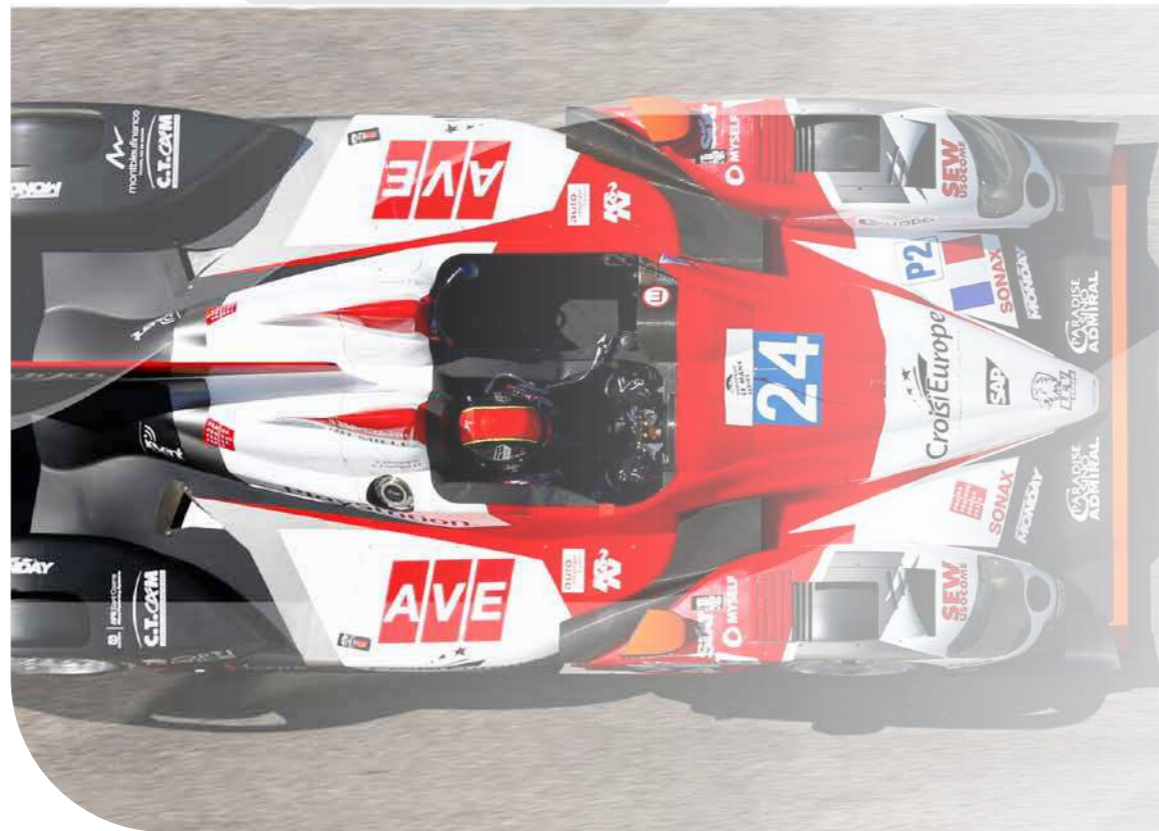
#37 Nicolas Minassian
Maurizio Mediani
Kirill Ladygin

KCMG

#47 Matthew Howson
Richard Bradley
Alex Imperatori

Murphy Prototypes

#48 Nathanaël Berthon
Rodolfo Gonzalez
Karun Chandhok



Entered in the FIA World Endurance Championship, European Le Mans Series and Asian Le Mans Series through its customer teams, as well as the United SportsCar Championship in the Prototype Challenge class, ORECA will again be the most represented prototype. Eight chassis will take part in the 24 Hours of Le Mans in LM P2, seven ORECA 03R and one Alpine A450, which is designed and built by ORECA.

Victorious on 18 occasions since making its competition debut in March 2011, the ORECA 03 has never won at the 24 Hours of Le Mans. Against tough competition, the ORECA 03R will be looking to succeed in the 82nd edition of the race. The ORECA delegation is composed of seven teams representing six countries : United Arab Emirates, France, Russia, Switzerland, Ireland and China.

Four of the six teams take part in the European Le Mans Series. Among the two French teams, Sébastien Loeb Racing will be competing in the 24 Hours of Le Mans for the first time, with Sébastien Loeb as team manager, while Signatech-Alpine returns from last year, the « Bleus » looking for glory following their European Le Mans Series championship last year. Race Performance plays the veteran with five consecutive participations in the LM P2 class, fourth with the ORECA 03. After discovering Le Mans last year, Murphy Prototypes is one of the favorites for 2014.

Two other teams compete in the FIA World Endurance Championship. The Russian team SMP Racing is present in several top series and began fielding an ORECA 03 in the middle of the 2013 season. For the Chinese outfit KCMG, they decided to change constructors during the off season and chose the ORECA 03. In addition, Millennium Racing will be making its return to racing at the 24 Hours of Le Mans.

Two manufacturers provide tyres for the ORECA 03 : three entries are on Michelin rubber, while the other five race with Dunlops. With one car powered by a Judd V8, the rest of the ORECA 03 entries use a Nissan V8 powerplant prepared by the ORECA engine department. With collaboration from the engine technicians and members of the customer team service, ORECA brings an overall package to support teams running the ORECA 03R.

#22 Fabien Giroix
Oliver Turvey
John Martin



Team Principal : Simon Dowson
Chief engineer : David Leach
Competition debut : 2009 as ADR-Delta


Racing experience :

Runner up Formula Superleague 2009 & 2010, Champion Superleague 2011
2nd in LM P2 Trophy in FIA World Endurance Championship 2012
3rd in LM P2 Trophy in FIA World Endurance Championship 2013

Results with the ORECA 03 :
2013

Won 6 Hours of Silverstone, LM P2 : Pizzonia/Graves/Walker
Won 6 Hours of Sao Paulo, LM P2 : Rusinov/Conway/Martin
Won 6 Hours of Circuit of the Americas, LM P2 : Rusinov/Conway/Martin
Won 6 Hours of Shanghai, LM P2 : Rusinov/Conway/Martin
Won 6 Hours of Bahrain, LM P2 : Rusinov/Conway/Martin
4 pole positions : 6 Hours of Silverstone, 6 Hours of Sao Paulo, 6 Hours of the Circuit of the Americas, 6 Hours of Shanghai

2012

Won 6 Hours of Silverstone, LM P2 : Matin/Graves/Charouz
Won 6 Hours of Fuji, LM P2 : Martin/Graves/Nakano
Won 6 Hours of Shanghai, LM P2 : Martin/Graves/Beche
2nd 6 Hours of Spa, LM P2 (1st in FIA-WEC LM P2) : Martin/Graves/Kerr
Pole positions : 6 Hours of Spa and 24 Hours of Le Mans, LM P2

Official website: www.delta-adr.com
Twitter : @delta_adr
Facebook : ADRDelta



#24 René Rast
Jan Charouz
Vincent Capillaire



Team Principal : Dominique Heintz
Technical director : Léo Thomas
Sporting director : Franck Tiné
Competition debut : 2012


Racing experience :

Champion Porsche Carrera Cup France, Overall, Gentlemen Drivers and Teams 2012
Champion Porsche Carrera Cup France, Gentlemen Drivers 2013
Runner up France FFSA GT 2013, Drivers & Teams
Runner up FIA GT Series 2013, Teams

Results with the ORECA 03 :
2014

7th 4 Hours of Silverstone : Capillaire/Charouz
2nd 4 Hours of Imola : Capillaire/Charouz

2012

2nd 6 Hours of the Castellet : Marroc/Minassian/Sarrazin
4th 6 Hours of Donington : Marroc/Minassian/Sarrazin
5th Test Day 24 Hours of Le Mans : Loeb/Marroc/Vernay

Official website: www.sebastienloeb racing.com
Facebook : /LoebRacing
Twitter : @LoebRacing



Team Principal : Boris Rotenberg
Sporting director : Sergey Zlobin
Team manager : Antonio Cazzago
Competition debut : 2008
Technical director : Luigi Urbinelli



#27 Anton Ladygin
Sergey Zlobin
Mika Salo



#37 Nicolas Minassian
Maurizio Mediani
Kirill Ladygin



Racing experience :

Champion European Le Mans Series, Drivers and Teams GTC 2013
 Runner-up Blancpain Endurance Series, Pro-Am 2013
 Competes in French F4 Championship, F.Renault 2.0 ALPS, World Series F.Renault 3.5,
 Eurocup F.Renault 2.0, Italian F4, ATS Formula 3 Cup, IndyCar, Karting...

Official website: www.smp racing.ru
Facebook : /SmpRacingRussia
Twitter : @SMP_Racing

Results with the ORECA 03 :

2014
 3rd 6 Hours of Silverstone, LM P2 : Zlobin/ Minassian/ Mediani
 4th & 5th 6 Hours of Spa, LM P2 : Ladygin/Shaitar/Ladygin & Zlobin/Minassian/Mediani

2013
 4th 3 Hours of the Hungaroring : Zlobin/Mediani
 6th 3 Hours of the Red Bull Ring : Zlobin/Mediani
 6th 3 Hours of Paul Ricard : Zlobin/Mediani



#34 Michel Frey
Franck Mailleux
John Lancaster



Based in : Münsingen, Suisse
Team Principal : Michel Frey
Chief engineer : Urs Meier
Race engineer : Paul Thomas
Competition debut : 2003


Racing experience :

Swiss Formula 2000 (champion 2005) then Renault Megane Trophy Eurocup and Le Mans Series (since 2010). Four Le Mans 24 Hours participations.

Results with the ORECA 03 :

- 2014**
2nd 4 Hours of Silverstone : Frey/Mailleux
- 2013**
2nd 3 Hours of Silverstone : Frey/Niederhauser
4th 3 Hours of Imola : Frey/Niederhauser
9th 24 Hours of Le Mans, LM P2 : Frey/Niederhauser/Bleekemolen
- 2012**
11th 24 Hours of Le Mans, LM P2 : Frey/Hirschi/Meichtry
5th 6 Hours of the Castellet : Frey/Hirschi/Meichtry
- 2011**
2nd 6 Hours of Silverstone, LM P2 : Frey/Meichtry/Rostan
6th 24 Hours of Le Mans, LMP2 : Frey/Meichtry/Rostan

Official website: www.race-performance.com
Facebook : /RacePerformance1



#36 Paul-Loup Chatin
Nelson Panciatici
Oliver Webb



Based in : Bourges, France
Director : Philippe Sinault
Team manager : Lionel Chevalier
Race engineer : Olivier Bacchis


Racing experience :

Runner-up in French F3 (1999), Champion French F3 (2000), Champion European F3 (1999, 2000 and 2002), four-time winner of the FIA Europa Cup (1999, 2000, 2002, 2003), Champion F3 Euro Series 2010 and runner-up F3 Euro Series 2011. Three 1-2 finishes at the Macao Grand Prix (2003, 2009 and 2010). Six participations at the 24 Hours of Le Mans.

Results with the ORECA 03 and Alpine A450 :

- 2014**
5th 3 Hours of Silverstone : Chatin/Panciatici/Webb
3rd 4 Hours of Imola : Chatin/Panciatici/Webb
- 2013**
Champion European Le Mans Series, Drivers & Teams
1st 3 Hours of the Hungaroring : Ragues/Panciatici
2nd 3 Hours of Imola : Ragues/Panciatici
2nd 3 Hours of the Red Bull Ring : Ragues/Panciatici
- 2012**
2nd 6 Hours of Bahrain: Mailleux/Lombard/Tresson
- 2011**
Champion « Teams LM P2 » Intercontinental Le Mans Cup
1st 6 Hours of Zhuhai, LM P2 : Mailleux/Ordoñez/Vernay
2nd 24 Hours of Le Mans, LM P2 : Mailleux/Ordoñez/Ayari
2nd 12 Hours of Sebring, LM P2 : Mailleux/Ordoñez/Ayari
2nd 6 Hours of Imola, LM P2 : Mailleux/Ordoñez/Ayari
3rd Petit Le Mans, LM P2 : Mailleux/Ordoñez/Vernay

Official site : www.signature-team.com
Facebook : /Team-SIGNATURE
Twitter : @SignatureRace



#47 Matthew Howson
Richard Bradley
Alex Imperatori



Based in : Hong Kong
Founder : Paul Ip
Team manager : Maarten De Busser
Technical director : Gregory Wheeler
Chief mechanic : Brian Colangelo
Competition debut : 2007



Racing experience :

Runner-up Asian Formula F3 & Japanese F3 (2007), Macao F3 Grand Prix (2008-2009), Clio Cup China Series (2009), China Touring Car Championship (2010), Japanese F3 (2007-2013), Formula Nippon (2009-2013), first Chinese team to take part in the FIA World Endurance Championship, winner of two races in the Asian Le Mans Series (2013).

Résultats avec la ORECA 03 :

2014
2nd 6 Hours of Silverstone, LM P2: Howson/Bradley/Matsuda
3rd 6 Hours of Spa, LM P2 : Howson/Bradley/Imperatori

Official website: www.kcmg.com.hk
Twitter : @KCMotorgroup
Facebook : /KCMGItD



#48 Nathanaël Berthon
Rodolfo Gonzalez
Karun Chandhok



Based in : Dublin, Irlande
Founder : Greg Murphy
Team manager : Malcolm Swetnam
Technical director : Michael Jakeman
Competition debut : 2012



Results with the ORECA 03 :

2014
Fastest lap 4 Hours of Silverstone

2013
1st 3 Hours of Paul Ricard : Hartley/Hirschi
2nd 3 Hours of the Hungaroring : Hartley/Hirschi
Pole position 3 Hours of the Hungaroring
Fastest lap 3 Hours of Silverstone, 3 Hours of the Red Bull Ring, 3 Hours of the Hungaroring, 3 Hours of Paul Ricard
6th 24 Hours of Le Mans, LM P2 : Hartley/Patterson/Chandhok

2012
3rd 6 Hours of Spa, LM P2 : Firth/Hughes/Hartley

Official website: www.murphyprototypes.com
Twitter : MurphyPrototype
Facebook : MurphyPrototypes



18 victories since 2011
15 pole positions since 2011
22 chassis built since 2011
13 different teams have raced with the ORECA 03 LM P2 since 2011

2013

- ★ Won 6 Hours of Silverstone, LM P2 : Delta-ADR, Pizzonia/Graves/Walker
- ★ Won 3 Hours of Imola : Thiriet by TDS Racing, Beche/Thiriet
- ★ Won 6 Hours of Spa, LM P2 : Pecom Racing, Perez-Companc/Kaffer/Minassian
- ★ Won 3 Hours of Red Bull Ring : Thiriet by TDS Racing, Beche/Thiriet
- ★ Won 6 Hours of Sao Paulo, LM P2 : G-Drive by Delta-ADR, Rusinov/Conway/Martin
- ★ Won 3 Hours of the Hungaroring : Signatech-Alpine, Ragues/Panciatici
- ★ Won 6 Hours of the Circuit of the Americas, LM P2 : G-Drive by Delta-ADR, Rusinov/Conway/Martin
- ★ Won 3 Hours of Paul Ricard : Murphy Prototypes, Hartley/Hirschi
- ★ Won 6 Hours of Shanghai, LM P2 : G-Drive by Delta-ADR, Rusinov/Conway/Martin
- ★ Won 6 Hours of Bahrain, LM P2 : G-Drive by Delta-ADR, Rusinov/Conway/Martin

2012

- ★ Won 6 Hours of the Castellet, overall : Thiriet by TDS Racing, Thiriet/Bèche
- ★ Won 6 Hours of Silverstone, LM P2 : ADR-Delta, Martin/Graves/Charouz
- ★ Won 6 Hours of Bahrain, LM P2 : Pecom Racing, Perez-Companc/Kaffer/Minassian
- ★ Won 6 Hours of Fuji, LM P2 : ADR-Delta, Martin/Graves/Nakano
- ★ Won 6 Hours of Shanghai, LM P2 : ADR-Delta, Martin/Graves/Beche

2011

- ★ Won 1000km of Spa-Francorchamps, LM P2 : TDS Racing, Thiriet/Bèche/Firth
- ★ Won 6 Hours of Estoril, LM P2 : TDS Racing, Thiriet/Bèche/Firth
- ★ Won 6 Hours of Zhuhai, LM P2 : Signatech-Nissan, Mailloux/Ordoñez/Vernay



Notable accomplishments
5th 24 Hours of Daytona 2014 : best result for a French constructor
6 out of 8 wins in FIA World Endurance Championship 2013
6 out of 8 pole positions in FIA World Endurance Championship 2013
4 out of 5 wins in European Le Mans Series 2013
4 out of 5 fastest race laps in European Le Mans Series 2013

2013

- ★ Champion « Teams LM P2 » European Le Mans Series (Signatech-Alpine)
- ★ Champion « Drivers LM P2 » European Le Mans Series (Pierre Ragues/Nelson Panciatici)

2012

- ★ Champion « Constructors LM P2 » European Le Mans Series (with Nissan)
- ★ Champion « Teams LM P2 » European Le Mans Series (Thiriet by TDS Racing)
- ★ Champion « Drivers LM P2 » European Le Mans Series (Pierre Thiriet/Mathias Beche)

2011

- ★ Champion « Constructors LM P2 » Le Mans Series (with Nissan)
- ★ Champion « Teams LM P2 » Intercontinental Le Mans Cup (Signatech-Nissan)



RACING

STORE

#ORECAALLAROUND

TECHNOLOGY

EVENTS



24 Hours of Le Mans 2014

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Created by Hugues de Chaunac at the beginning of the 1970s, ORECA (ORganisation Exploitation Compétition Automobile) celebrated its 40th anniversary in 2013. A racing team at first, the Group has evolved to cover every facet of racing with a panel of activities centered at two sites : one at Signes, a few metres from the Circuit Paul Ricard, the other at Magny-Cours, near the F1 circuit.

« The Motorsport Company » is comprised of four branches: Racing which includes the race team, Techology which houses research and development activities as well as constructor and engine preparer activities, Store which distributes parts and accessories to enthusiasts and racers alike, Events which acts as an agency to various companies and major players in the automotive industry.

With over 200 collaborators working in more than 10 000 m² of dedicated space, the Groupe has become a global company, including an Asian presence in Hong Kong as well as partnerships with some of the world's top constructors, manufacturers and other automotive industry companies.

The 24 Hours of Le Mans symbolises the diversity of Groupe ORECA's activities since all four departments will be respresented : Racing with TOYOTA Racing, Technology via the ORECA 03 in LM P2 and REBELLION in LM P1, and finally Store and Events in partnership with TOYOTA.

SOMMAIRE

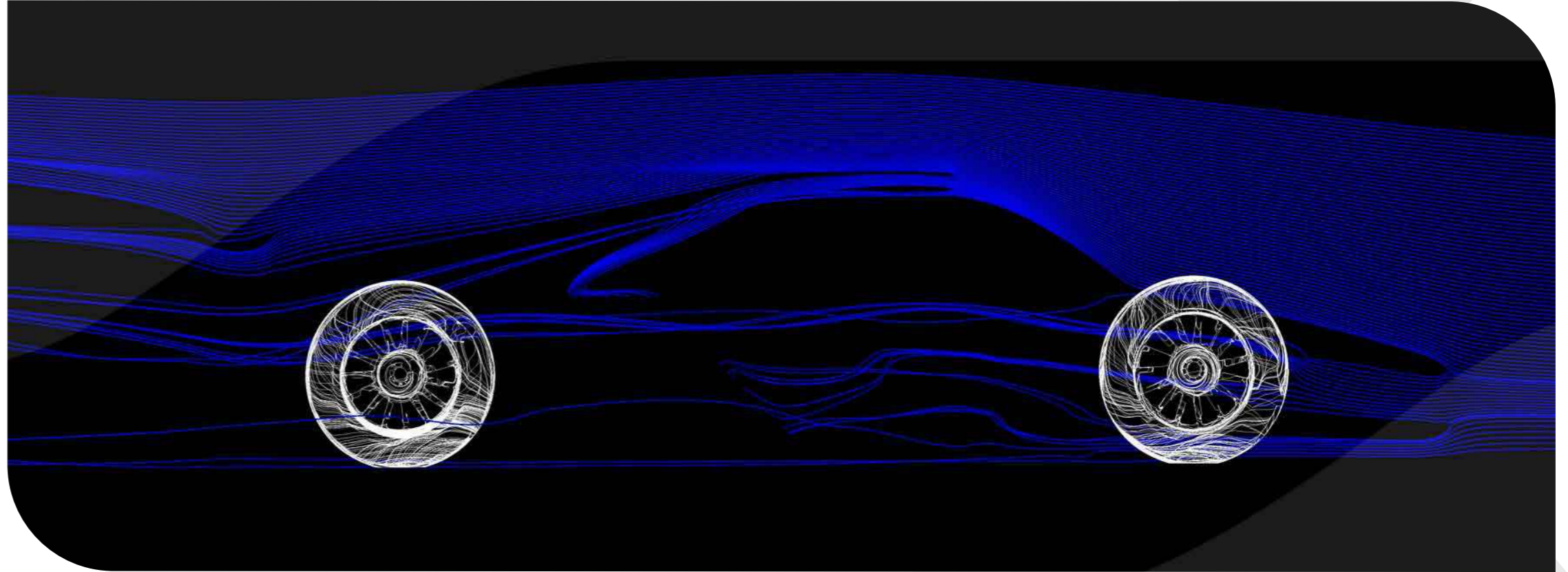
3	Groupe ORECA
4-5	ORECA Technology - R&D
6-9	REBELLION R-One - Philosophy
10-11	REBELLION R-One - Technical details
12-13	REBELLION Racing
14-15	ORECA Technology - Engine
16-17	ORECA Racing
18-19	Results
20	ORECA Store
21	ORECA Events
22-23	ORECA at the international level

Although the Technology department first developed under Team ORECA's programs, over time the branch diversified to include racing car manufacturer roles, showing its capabilities to both external companies as well as its know-how in other disciplines outside motor sports.

ORECA Technology's research and development department has the human and technical means to take on any type of project. Comprised of a design bureau with about 10 workers, the R&D department relies on strong partners including longtime associates CD-adapco and Dassault Systèmes//Keonys as well as ChassisSim for specific simulator needs. ORECA Technology's know-how combines CAO, reverse engineering, structural analysis as well as dynamic simulations and CFD. All of this is coupled with production tools in welding, machining, electrical and composites. In fact, ORECA has recently acquired an autoclave oven for this very purpose. In addition, the department houses a metrological service and a proven qualification and certification system.

Thanks to its know how and tools, ORECA Technology responds to the internal needs of the Group, as well as external requests, including regional companies. The department regularly works with major manufacturers, such as the Mégane Trophy for Renault and Fabia Ice for Skoda.

It is because of this global project management ability that ORECA Technology was chosen by REBELLION Racing to design and build the REBELLION R-One, the first LM P1-L to race against Audi, Porsche and TOYOTA LM P1-H entries.



General approach

« The design bureau began the prototype study from a blank page and completed the project in record time. Barely 12 months from the first pen stroke to the shakedown ! We rely on our previous experience in order to reach our objectives. Of course, the approach had to be pragmatic and « efficient » along the same lines as the FIA/ACO technical regulations. »

The Look

« We had no limit in terms of design. For example, there was no obligation to have very low sidepods. It was the aerodynamic developments and simulator results that dictated this choice. Then there were a few details where we could take a few liberties, such as integrating the REBELLION logo above the headlamps. But it was always performance that guided our choices. »

The parameters

« There was a lot to take into account, above and beyond the aerodynamics. We had an objective in terms of usage : to have a true capacity to affect the car's settings, accessibility to parts, as well as the life cycle of said parts. We also had to adapt to the new regulations and to energy management which have a heavy impact on the car's functions. Therefore we looked to reduce drag, focus on weight balance, etc. »



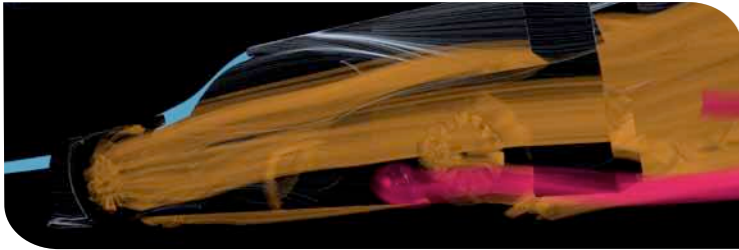
The nose

« There wasn't a desire to have an either wide or thin nose. The ORECA 01 had a thin nose, but that's because we began with an existing design. With the R-One, we had more latitude. Honestly, we have solutions for noses that are more original and perform better, but these were not realistic for a private constructor and in the time frame we had. It's a compromise you have to find and accept. »

Wisdom

« Innovation implies much research and development. At the same time, our budget isn't the same as the major manufacturers and our situation doesn't allow for maximum risk taking. Everything must be weighed with innovation against risk taken. It's a fine balance that must be found between risk and reward. »





363 days

« That's the time between the first piece designed and the first roll out. It was 12 very intense months for the Design Bureau which led this exciting project. There were moments of reflection, even questions. But that's common in this type of project. You must always anticipate potential problems in order to find solutions. In terms of the planning, we knew it would be tight. Homologation tests are not easy moments because passing them on the first try is not always the case for everyone. But we did it. »

Feather weight

« Weight was clearly an important factor in our work. It's not a question of losing weight on such and such part, but a global philosophy. Therefore we looked to optimise everything and to shed every gram everywhere possible. For example, we worked very hard on the monocoque. We have a certain latitude when it comes to weight and ballasts. This initial objective was more than reached. »



Magic

« The final phase where the car is assembled is the most magical especially with the first roll out. It's finally the moment where all of that work from the last few weeks or months is realised on the track. It's the first result of sorts. Completing the first few meters at Le Mans will also likely be a big moment, but the baby will have already grown up. »

360°

« Le Mans will be intense for ORECA. Intense and exciting with TOYOTA Racing, with the REBELLION R-One and the ORECA 03R. Our approach is pragmatic and structured to manage all at once. It's all one big family on location, but the players will be different, with teams dedicated to TOYOTA, to the development of the R-One and the customer support for the LM P2 teams. Our efforts are compartmentalised, with shared passion and objectives : lead our projects to success. »

Chassis

Carbon and honeycomb
Length: 4650 mm
Width: 1900 mm
Height: 1150 mm
Front overhang: 1550 mm
Rear overhang : 1560 mm
Wheelbase: 2960 mm
Weight: 850 Kg

Engine

Toyota RV8KLM 90° V8
Displacement: 3400 CC
Horsepower : approx. 500 HP
Weight : approx. 120 kg
Lubrification : dry sump / oil pump
Electronics management : TMG

Gearbox

Brand : Xtrac
Type : Transversal magnesium casing RZ5
Gear changes : paddle shift / electronic management Megaline
Gears : 7 + reverse
Clutch : Carbon AP racing
Differential : Xtrac, limited slip
Driveshaft : monobloc bespoke



Brakes

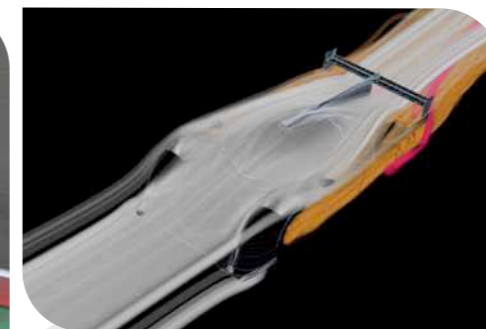
Ventilated carbon discs
Brand : Brembo
Front discs : Brembo diametre 380 mm
Front caliper : Brembo monobloc 6 pistons
Front brake pads: Brembo
Rear discs: Brembo diametre 337 mm
Rear caliper: Brembo monobloc 6 pistons
Rear brake pads: Brembo

Safety

Six-point harness adapted to HANS system
Fuel reservoir with safety bladder and integrated reserve system

Bodywork : Carbon/kevlar
Custom heated windshield

Suspension : double wishbone, with pushrod
Shocks: PKM
Tyres : Michelin front and rear : 31-71/R18
Front Wheels OZ: 18"x13"
Rear Wheels OZ: 18"x13"



#12 Nicolas Prost
Nick Heidfeld
Mathias Beche



Team principal : Alexandre Pesci
Team manager : Bart Hayden
Technical director: Ian Smith
Engineer #12 : James Robinson
Engineer #13 : Saimon Cayzer



#13 Andrea Belicchi
Dominik Kraihamer
Fabio Leimer



Competition debut : 1995 as SEBAH Racing
2010 as REBELLION Racing

Official website: www.rebellion-racing.com/
Twitter : @RebellionRacing
Facebook : /RebellionRacing

Racing experience / Results :

As REBELLION Racing : 3rd Le Mans Series LM P1 (2010), Champion Le Mans Series (2011), 3rd Intercontinental Le Mans Cup and 1st Privateer (2011), 4th 24 Hours of Le Mans and 1st Privateer (2012), 3 class podiums at the 24 Hours of Le Mans, two-time winner of the FIA Endurance Teams LM P1 Trophy (2012 and 2013), 14 class wins LM P1 in FIA World Endurance Championship, two-time winner Petit Le Mans (2012 and 2013)

As SEBAH Racing : Two-time champion Le Mans Series GT (2004 and 2005), Runner-up Le Mans Series LM P2 (2009), Winner of the Michelin Green X Challenge (2009).



Born out of the purchase of SNBE in 2004, ORECA's engine department is based in Magny-Cours, a few meters from the F1 circuit. Continually evolving, the department led by Serge Meyer today has about 50 collaborators and top facilities : 3,600 sq.m. of infrastructure, 4 test benches including an asynchronous engine, a top of the line distribution bench and a gasket flow bench. Capable of designing an engine from a blank sheet of paper to its production, the engine department is involved at all levels of racing, including the 24 Hours of Le Mans. Six LM P2 – five ORECA 03 and one Alpine A450 – are powered by ORECA Engine, which prepares the Nissan V8 powerplant.

Several engine technicians are present within the customer teams, bringing their experience and know-how to the track in terms of performance, consumption and strategy.

ORECA's engine department is present in several championships and works closely with major manufacturers. In rally, partnered with Skoda, with the title in European Rally Championship and Asia-Pacific Rally Championship. In super touring, providing the powerplants for the factory Lada Granta entries.

In rallycross, preparing the Peugeot 208 engine for Team Peugeot-Hansen and Albatec Racing after winning the European Championship and X-Games with Hansen Motorsport.

And finally in rally-raid, with the SMG Buggies and prototypes built by the Chinese constructor Great Wall. Without forgetting hill climb events and single-marque formulas.



Throughout its years in racing, ORECA has been involved with some of the biggest manufacturers and the 24 Hours of Le Mans are no different. ORECA will return in 2014 to bring operational support to TOYOTA Racing for their two official TS040 HYBRID entries. This translates to ORECA engineers and experienced endurance racing mechanics being on hand, as well as marketing support.

This partnership has been rich in success since its beginnings at the end of 2011. The TS030 HYBRID claimed the first victory for a car with « supercapacitor» hybrid technology at the 6 Hours of Sao Paulo in 2012. The team took two other wins that same year in the FIA World Endurance Championship, at Fuji and Shanghai, and one more in 2013, at Bahrain. This in addition to a second place finish in the 24 Hours of Le Mans last year. In its racing debut, the TS040 HYBRID claimed a 1-2 finished at the 6 Hours of Silverstone in April.

For ORECA, this is its 20th participation at the 24 Hours of Le Mans, with the first being in 1977 with a Renault-Alpine A442. ORECA has taken part in this legendary event with nine other marques: BMW (1981), Mazda (1991, 1992), Chrysler (1996-2002), Reynard (2000), Dallara (2001, 2002), Audi (2005), Saleen (2007), Peugeot (2010-2011) and Toyota (2012-2013).



ORECA's results at the 24 Hours of Le Mans.

1 outright victory in support of Mazdaspeed :
1991 - Mazda 787B n°55 : Volker Weidler / Johnny Herbert / Bertrand Gachot

3 class victories as Viper Team ORECA :

- ★ 1998 - Chrysler Viper GTS-R n°53 : Justin Bell / Luca Drudi / David Donohue (GTS)
- ★ 1999 - Chrysler Viper GTS-R n°51 : Olivier Beretta / Karl Wendlinger / Dominique Dupuy (GTS)
- ★ 2000 - Chrysler Viper GTS-R n°51 : Karl Wendlinger / Olivier Beretta / Dominique Dupuy (GTS)

1 fastest race lap: 2010 - Loïc Duval : Peugeot 908 HDi FAP n°10
7 top fives in the overall classification (2001, 2002, 2005, 2009, 2010, 2011, 2013)

Although regularly present at the 24 Hours of Le Mans and in endurance racing, ORECA is no less a multi-disciplined racing team. Team ORECA, whether under its own name or as an official representative for a manufacturer, has won on all terrains : single seaters, rally, as well as rallycross and rally-raid and event GT and super touring. In total, ORECA has enjoyed over 300 wins in competition and 40 national and international titles.

As the only French team to have won the 24 Hours of Daytona and only French team to have claimed victory at the 12 Hours of Sebring with a French car and driver lineup, ORECA is not ruling out the possibility of returning to other disciplines of racing in the future.

- ★ **2013** 2 wins in FIA World Endurance Championship - TOYOTA Racing
- ★ **2012** 3 wins in FIA World Endurance Championship - TOYOTA Racing
- ★ **2011-2012** Constructors Winner Andros Trophy - Skoda (2 wins)
- ★ **2011** Winner 12 Hours of Sebring - Nicolas Lapierre/Loic Duval/Olivier Panis (Peugeot 908 HDi FAP)
- ★ **2010** Champion Drivers Le Mans Series LM P1 - Stéphane Sarrazin (Peugeot 908 HDi FAP)
Champion Teams Le Mans Series LM P1 (Peugeot 908 HDi FAP)
Winner 1000km of Portimao (Peugeot 908 HDi FAP)
- ★ **2009** Winner 1000 km of Silverstone - Olivier Panis/Nicolas Lapierre (Oreca 01)
- ★ **2008** World Champion WTCC - Yvan Muller (Seat)
- ★ **2007** Champion Le Mans Series LM GT1 - Soheil Ayari/Stéphane Ortelli (Saleen S7R) (4 wins)
Champion French GT - Soheil Ayari/Raymond Narac (Saleen S7R) (10 wins)
- ★ **2006** Champion French GT - Soheil Ayari/Bruno Hernandez (Saleen S7R) (8 wins)
- ★ **2005** Winner 1000 km of Silverstone - Stéphane Ortelli/Allan McNish (Audi R8)
- ★ **2004** European Rally Champion - Simon Jean-Joseph (Renault Clio)
Spanish Rally Champion - Alberto Hevia (Renault Clio)
- ★ **2003** French Rally Champion - Simon Jean-Joseph (Renault Clio)
Junior World Rally Champion JWRC - Brice Tirabassi (Renault Clio)
- ★ **2002** French Rally Champion Super 1600 - Brice Tirabassi (Citroën Saxo)
Winner FIA Sportscar at Estoril - Olivier Beretta/Nicolas Minassian (Dallara LMP)
- ★ **2000** Winner 24 Hours of Daytona - Olivier Beretta/Karl Wendlinger/Dominique Dupuy (Dodge Viper)
1st & 2nd LM GTS 24 Hours of Le Mans (Chrysler Viper)
1st, 2nd & 3rd LM GTS 12 Hours of Sebring (Dodge Viper)
Champion Teams American Le Mans Series LM GTS (Dodge Viper)
- ★ **1999** 1st & 2nd LM GTS, 24 Hours of Le Mans (Chrysler Viper)
Champion Teams American Le Mans Series LM GTS (Dodge Viper)
Champion Teams FIA GT (Chrysler Viper)
- ★ **1998** 1st & 2nd GT2, 24 Hours of Le Mans (Chrysler Viper)
Champion Teams FIA GT GT2 (Chrysler Viper)
- ★ **1997** Champion Teams FIA GT GT2 (Chrysler Viper)
- ★ **1996-1997** Winner Drivers Classification Andros Trophy - Yvan Muller (BMW 318 ti Compact & Z3)
Winner Constructors Classification Andros Trophy - BMW



- ★ **1995-1996** Winner Drivers Classification Andros Trophy - Yvan Muller (BMW 318 ti)
Winner Constructors Classification Andros Trophy - BMW
- ★ **1995** French Supertouring Champion - Yvan Muller (BMW 318 ti)
French Supertouring Champion B - Stéphane Ortelli (BMW 318 ti)
- ★ **1992** Rally-Raid Spanish Champion - Salvador Servia (Lada Samara T3)
- ★ **1991** Winner 24 Hours of Le Mans (Mazdaspeed - Mazda 787)
- ★ **1990** Winner Pharaons Rally (Lada Samara T3)
- ★ **1989** French F3 Champion - Jean-Marc Gounon (Reynard-Alfa Romeo)
French Rallycross Champion - Philippe Wambergue (Peugeot 205 T16)
- ★ **1988** French F3 Champion - Erik Comas (Dallara-Alfa Romeo)
French Rallycross Champion - Guy Fréguelin (Peugeot 205 T16)
- ★ **1987** French F3 Champion - Jean Alesi (Martini-Alfa Romeo & Dallara-Alfa Romeo)
- ★ **1986** French F3 Champion - Yannick Dalmas (Martini-Volkswagen)
Won Monaco Grand Prix F3 - Yannick Dalmas (Martini-Volkswagen)
- ★ **1985** French F3 Champion - Pierre-Henri Raphanel (Martini-Alfa Romeo)
Won Monaco Grand Prix F3 - Pierre-Henri Raphanel (Martini-Alfa Romeo)
German Rally Champion - Kalle Grundle (Peugeot 205 T16)
- ★ **1984** French F3 Champion - Olivier Grouillard (Martini-Alfa Romeo)
French F.Renault Champion- Yannick Dalmas (Martini)
- ★ **1983** French F3 Champion - Michel Ferté (Martini-Alfa Romeo)
Won Monaco Grand Prix F3 - Michel Ferté (Martini-Alfa Romeo)
- ★ **1982** Won Monaco Grand Prix F3 - Alain Ferté (Martini-Alfa Romeo)
- ★ **1981** Won Monaco Grand Prix F3 - Alain Ferté (Martini-Alfa Romeo)
- ★ **1979** French F3 Champion - Alain Prost (Martini-Renault)
European F3 Champion - Alain Prost (Martini-Renault)
Won Monaco Grand Prix F3 - Alain Prost (Martini-Renault)
- ★ **1977** European F2 Champion - René Arnoux (Martini-Renault)
Won Monaco Grand Prix F3 - Didier Pironi (Martini-Toyota)
- ★ **1975** European F2 Champion - Jacques Laffite (Martini-BMW)
- ★ **1972-1973** French and European F3 Championships (2 wins) (Martini-Vegantune)



ORECA is TOYOTA Racing team's partner for track operations as well as its distributor of parts and accessories dedicated to motorsports competition and automotive recreation.

Number one in France and among the European leaders, ORECA Store manages the official merchandising for TOYOTA's Le Mans project. The ORECA Store works in collaboration with TOYOTA Motorsport GmbH (TMG) and manages the e-commerce site whose URL is <http://shop.toyotahybridracing.com/>.

During the 24 Hours of Le Mans, a 50m² space reserved for TOYOTA Hybrid Racing will be situated at the heart of the village. A corner store will also be present at TOYOTA hospitality. For the duration of the season, more than 150 items are available and distributed in more than 50 countries, or the equivalent of 20,000 products.

A multi-channel store at the website www.oreca-store.com, 30,000 catalogs distributed, but also two stores and corporate events, ORECA Store carries 35,000 items for more than 250 brands, notably Sparco, Stilo, Bell, Stack, Recaro, Ferodo, AP Racing, Pagid, Pirelli, Dunlop, etc. More than 50 countries are served each year, with products for enthusiasts and racers alike. ORECA Store offers merchandise and brand exclusives: the Sébastien Loeb collection, the brands Turn One and Red Spec, among others.

In May, the website www.oreca-store.com radically evolved with a new version aimed at optimizing the customer experience, the goal being to improve the user's comfort level, the site's user-friendliness and information access through the creation of new features with semi-responsive versions for tablets and mobile devices.



Automobile event agency, motorsports and automotive recreation, ORECA Events is TOYOTA Motor Europe's operator at the 24 Hours of Le Mans. Our team is in charge of Public Relations management and organization for the duration of race week. More than 60 individuals are mobilized for nearly 1,000 invitees. Other activities are conducted with TOYOTA France, whether it be at the Circuit Paul Ricard or at Le Mans for the launch of the TOYOTA GT 86, which is also the official GT Tour pace car.

The partnership with TOYOTA represents only a portion of the activities carried out by ORECA Events. Every year, more than 70 custom events are put in place to support advertisers, constructors and manufacturers to strengthen image and brand loyalty, such as:

- ★ driving experiences
- ★ Roadshows
- ★ public relations
- ★ workshops and incentives
- ★ product launches
- ★ interactive attractions
- ★ professional training, etc

ORECA Events is also a championship organizer and promoter, as well as circuit operator.

ORECA has been in Asia for three years via the creation of its subsidiary ORECA Asia based in Hong Kong and whose activity develops from year to year. ORECA Asia is, among other things, in charge of the organization of the Michelin Pilot Experience program in Malaysia. During these incentive days, Michelin invites both its distributors and clients from Asia and the South Sea Islands with on the agenda circuit driving in single-seaters or sedans.

Throughout these last few months, ORECA Asia has reinforced its ties with locals by bringing its expertise and extensive experience at the event level, in the manufacturing of race cars and in the distribution of parts and accessories. The subsidiary continues therefore to forge even more solid relations with businesses in China, Southeast Asia and Northern Asia, and this will be evidenced by new partnerships in the coming weeks.

The Groupe ORECA is also represented in competition by its customer teams. In Asia – through the Chinese team KCMG which has entered an ORECA 03 in the FIA World Endurance Championship and the Asian Le Mans Series. In the United States – where ORECA provides the ORECA-FLM09 prototypes that make up the Prototype Challenge class that has had significant success since 2010 in American Le Mans Series and now in the TUDOR United SportsCar Championship.

Historically very fond of the U.S., ORECA is also willing to develop itself in the American market, as in the Middle East and in Eastern Europe, where projects are in the process of being outlined.

