

RACECARD

2019/2020 FIA WEC



BAPCO 8 HOURS OF BAHRAIN

**DECEMBER 14,
2019**

ROUND 4
2019/2020
FIA WORLD
ENDURANCE
CHAMPIONSHIP

**MANAMA,
KINGDOM
OF BAHRAIN**



PREVIOUS BAHRAIN WINNERS

2012

Tréluyer/Fässler/Lotterer
(Audi R18 e-tron quattro/Michelin)

2013

Davidson/Buemi/Sarrazin
(Toyota TS030 Hybrid/Michelin)

2014

Wurz/Sarrazin/Conway
(Toyota TS040 Hybrid/Michelin)



2015

Dumas/Jani/Lieb
(Porsche 919 Hybrid/Michelin)

2016

Di Grassi/Duval/Jarvis
(Audi R18/Michelin)

2017

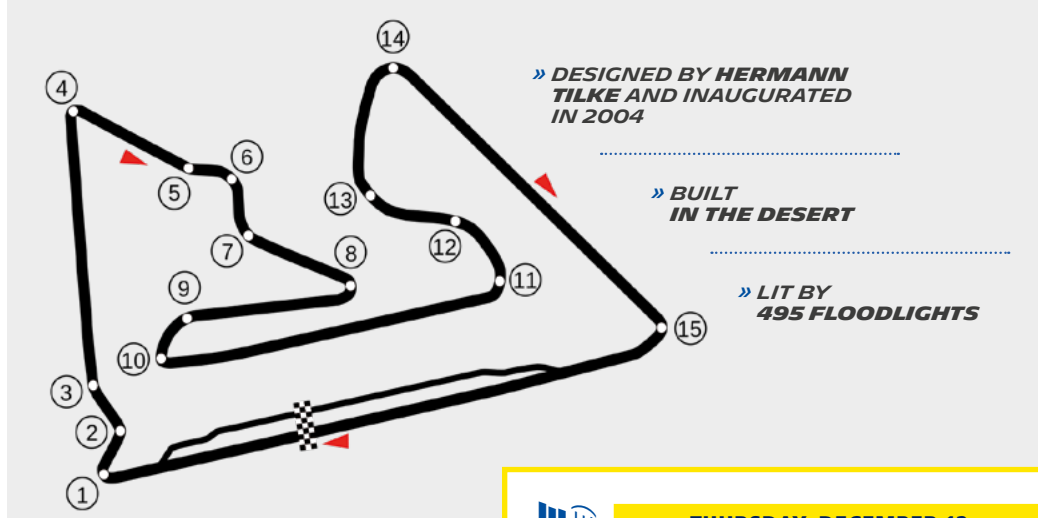
Buemi/Davidson/Nakajima
(Toyota TS050 Hybrid/Michelin)

LAP RECORD:

Lucas di Grassi
(Audi R18/Michelin)
1m38.828s (2016)

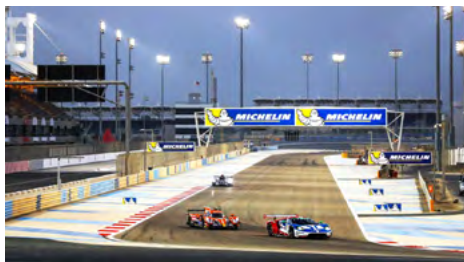
THE CIRCUIT BAHRAIN INTERNATIONAL CIRCUIT (SAKHIR)

31 ENTRIES	5.412 KM	15 TURNS (5 LEFT - 10 RIGHT)	CLOCKWISE
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THE 2017 RACE

- » **Winners:** Buemi/Davidson/Nakajima (Toyota TS050 Hybrid/Michelin), 199 laps
- » **Pole position:** Jani/Lotterer/Tandy (Porsche 919 Hybrid/Michelin), 1m39.383s
- » **Fastest race lap:** André Lotterer (Porsche 919 Hybrid/Michelin), 1m42.862s
- » **Top speed:** Roman Rusinov/Mathieu Vaxivière/Thomas Laurent (Oreca07-Gibson), 289kph
- » Michelin's **50th FIA WEC victory**
- » The Porsche 919 Hybrid/Michelin's **final FIA WEC appearance**
- » Ferrari/Michelin **one-two** in LMGTE Pro



TIMETABLE (LOCAL TIME)

THURSDAY, DECEMBER 12		
2:00pm	Free Practice 1	90 minutes
6:30pm	Free Practice 2	90 minutes
FRIDAY, DECEMBER 13		
11:15am	Free Practice 3	60 minutes
4:40pm	LM GTE Qualifying	20 minutes
5:10pm	LMP Qualifying	20 minutes
SATURDAY, DECEMBER 14		
3:00pm	Start, 8 Hours of Bahrain	

Source : fiawec.com - Informations susceptibles de changer

THE 2019 8 HOURS OF BAHRAIN

- » The FIA WEC is back in Bahrain for first time since 2017
- » The 2019/2020 FIA WEC's midpoint
- » The majority of the race takes place at night
- » The race is held during Bahrain's National Day festivities (December 16)





PIERRE ALVES

Endurance Programme Manager, Michelin Motorsport

"Sakhir is something of an atypical venue because of its layout which calls for frequent hard reacceleration, making traction performance very important, while big demands are made of the tyres longitudinally. The surface is even more abrasive than Shanghai, not only due to the asphalt but also because of the sand that gets blown onto the track. Grip levels are low but tend to pick up as the weekend progresses. The majority of the race takes place after sunset when the conditions can become humid."

THE SURFACE IS EVEN MORE ABRASIVE THAN SHANGHAI



MICHELIN TYRES

28 OF THE 31 CARS ON MICHELIN TYRES

ALLOCATION 8 HOURS OF BAHRAIN



	SLICKS Soft, Medium	INTERMEDIATE	WET
LM P1	31/71-18	31/71-18	31/71-18

	SLICKS Medium, Hard	INTERMEDIATE	WET
LM P2	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18

	SLICKS Aston Martin: Medium, Hard Porsche and Ferrari: Soft, Medium	INTERMEDIATE	WET
LM GTE PRO	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18



	SLICKS Aston Martin and Porsche: Medium, Hard Ferrari: Soft, Medium	INTERMEDIATE	WET
LM GTE AM	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18

	SLICKS Aston Martin and Porsche: Medium, Hard Ferrari: Soft, Medium	INTERMEDIATE	WET
LM GTE AM	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18	FRONT: 30/68-18 REAR: 31/71-18

EX.: 31/71-18: width (cm) / exterior diameter (cm) x interior diameter (inches)

ALLOCATION (MICHELIN PILOT SPORT ENDURANCE SLICKS) PER CAR – 8 HOURS OF BAHRAIN



	Free Practice	Qualifying + Race
LM P1	12 tyres	Qualifying + Race: 26 tyres
LM P2	12 tyres	Qualifying + Race: 26 tyres
LM GTE PRO	12 tyres	Qualifying + Race: 26 tyres
LM GTE AM	16 tyres	Qualifying + Race: 34 tyres



Sakhir Palace



BAHRAIN TRIVIA

- » Bahrain is a Persian Gulf archipelago made up of 33 islands
- » The main island is connected to Saudi Arabia by the King Fahd Causeway
- » Bahrain's capital Manama is situated in the north of the country
- » Bahrain is the world's fourth most densely-populated country: 2,641 people/sq. km
- » Sakhir International Circuit was built in a desert (92% of the country is desert)
- » Sakhir Palace is a huge palace near Zallaq built in 1901



BAHRAIN AND MOTORSPORT

- » Michelin won the F1 grands prix at Sakhir in 2005 and 2006 with Fernando Alonso
- » A 'rookie' test will be held in Bahrain the day after the race
- » In 2004, Bahrain became the first Gulf State to host a Formula 1 grand prix
- » Sakhir also hosts karting endurance races and dragster events



Bahrain 2017 winners: Anthony Davidson/Kazuki Nakajima/Sébastien Buemi



MICHELIN FACT

The **Ferrari 458 Italia** and **Porsche 911 RSR** (all versions included) have scored 14 LMGT-E Pro class wins each on Michelin tyres



LM P1

- N°1 **REBELLION RACING • REBELLION R13 - GIBSON**
SENNA/MENEZES/NATO 
- N°5 **TEAM LNT • GINETTA G60 - AER**
ROBERTSON/HANLEY/KING 
- N°6 **TEAM LNT • GINETTA G60-AER**
SIMPSON/DYSON/SMITH 
- N°7 **TOYOTA GAZOO RACING • TOYOTA TS050 - HYBRID**
CONWAY/KOBAYASHI/LOPEZ 
- N°8 **TOYOTA GAZOO RACING • TOYOTA TS050 - HYBRID**
BUEMI/NAKAJIMA/HARTLEY 

LM GTE AM

- N°54 **AF CORSE • FERRARI 488 GTE EVO**
FLOHR/CASTELLACCI/FISICHELLA 
- N°56 **TEAM PROJECT 1 • PORSCHE 911 RSR**
PERFETTI/HEINEMEIER-HANSON/CAIROLI 
- N°57 **TEAM PROJECT 1 • PORSCHE 911 RSR**
KEATING/TEN VOORDE/BLEEKEMOLEN 
- N°62 **RED RIVER SPORT • FERRARI 488 GTE EVO**
GRIMES/MOWLEN/HOLLINGS 
- N°70 **MR RACING • FERRARI 488 GTE**
ISHIKAWA/BERETTA/COZZOLINO 
- N°77 **DEMPSEY-PROTON RACING • PORSCHE 911 RSR**
RIED/CAMPBELL/PERA 
- N°83 **AF CORSE • FERRARI 488 GTE EVO**
PERRODO/COLLARD/NIELSEN 
- N°86 **GULF RACING • PORSCHE 911 RSR**
WAINWRIGHT/WATSON/BARKER 
- N°88 **DEMPSEY-PROTON RACING • PORSCHE 911 RSR**
PREINING/TBA/TBA 
- N°90 **TF SPORT • ASTON MARTIN VANTAGE**
YOLUC/EASTWOOD/ADAM 
- N°98 **ASTON MARTIN RACING • ASTON MARTIN VANTAGE**
DALLA LANA/TURNER/GUNN 












LM P2

- N°22 **UNITED AUTOSPORTS • ORECA07 - GIBSON**
HANSON/ALBUQUERQUE/DI RESTA 
- N°26 **G-DRIVE RACING • AURUS01 - GIBSON**
RUSINOV/VAN UITERT/VERGNE 
- N°29 **RACING TEAM NEDERLAND • ORECA 07 - GIBSON**
VAN EERD/VAN DER GARDE/DE VRIES 
- N°33 **HIGH CLASS RACING • ORECA07 - GIBSON**
PATTERSON/YAMASHITA/FJORBACH 
- N°36 **SIGNATECH ALPINE ELF • ALPINE A470 - GIBSON**
LAURENT/NEGRAO/RAGUES 
- N°37 **JACKIE CHAN DC RACING • ORECA07 - GIBSON**
TUNG/AUBRY/STEVENS 
- N°38 **JOTA • ORECA 07 - GIBSON**
GONZALEZ/DA COSTA/DAVIDSON 
- N°42 **COOL RACING • ORECA 07 - GIBSON**
LAPIERRE/BORGA/COIGNY 
- N°47 **CETILAR RACING • DALLARAP217 - GIBSON**
LACORTE/BELICCHI/SERNAGIOTTO 



LM GTE PRO

- N°51 **AF CORSE • FERRARI 488 GTE EVO**
CALADO/PIER GUIDI 
- N°71 **AF CORSE • FERRARI 488 GTE EVO**
RIGON/MOLINA 
- N°91 **PORSCHE GT TEAM • PORSCHE 911 RSR-19**
BRUNI/LIETZ 
- N°92 **PORSCHE GT TEAM • PORSCHE 911 RSR-19**
CHRISTENSEN/ESTRE 
- N°95 **ASTON MARTIN RACING • ASTON MARTIN VANTAGE AMR**
SORENSEN/THIIM 
- N°97 **ASTON MARTIN RACING • ASTON MARTIN VANTAGE AMR**
LYNN/MARTIN 












LMP1 CHAMPIONSHIP

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1 st	TOYOTA GAZOO RACING		26	26	18					70
2 nd	REBELLION RACING		2	15	26					43
3 rd	TEAM LNT		15	2	12					29



LMP1 DRIVERS

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1 st	BRENDON HARTLEY		18	26	18					62
1 st	KAZUKI NAKAJIMA		18	26	18					62
1 st	SÉBASTIEN BUEMI		26	18	18					62
2 nd	JOSE MARIA LOPEZ		26	18	15					59
2 nd	KAMUI KOBAYASHI		26	18	15					59
2 nd	MIKE CONWAY		26	18	15					59
3 rd	BRUNO SENNA		2	15	26					43
3 rd	GUSTAVO MENEZES		2	15	26					43
3 rd	NORMAN NATO		2	15	26					43












LMP2 CHAMPIONSHIP

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1 st	RACING TEAM NEDERLAND		16	25	10					51
2 nd	JACKIE CHAN DC RACING		12	19	18					49
3 rd	SIGNATECH ALPINE ELF		18	8	12					38















LMP2 DRIVERS

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1 st	FRITS VAN EERD		16	25	10					51
1 st	GIEDO VAN DER GARDE		16	25	10					51
2 nd	GABRIEL AUBRY		12	19	18					49
2 nd	HO-PIN TUNG		12	19	18					49
2 nd	WILL STEVENS		12	19	18					49
3 rd	ANDRÉ NEGRÃO		18	8	12					38
3 rd	PIERRE RAGUES		18	8	12					38
3 rd	THOMAS LAURENT		18	8	12					38












GTE CHAMPIONSHIP

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1st	PORSCHE		43	27	44					114
2nd	ASTON MARTIN		25	40	27					92
3rd	FERRARI		21	22	12					55

















GTE DRIVERS

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1st	KEVIN ESTRE		18	18	26					62
1^{er}	MICHAEL CHRISTENSEN		18	18	26					62
2nd	GIANMARIA BRUNI		25	9	18					52
2nd	RICHARD LIETZ		25	9	18					52
3rd	MARCO SORENSEN		10	25	12					47
3rd	NICKI THIM		10	25	12					47

GTE AM CHAMPIONSHIP

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1st	TF SPORT		7	26	25					58
2nd	AF CORSE		25	18	12					55
3rd	TEAM PROJECT 1		1	15	18					34

GTE AM DRIVERS

										TOT.
		30/08-1/09	6/10	10/11	14/12	1/02	20/03	25/04	13-14/07	
1st	CHARLES EASTWOOD		7	26	25					58
1st	JONATHAN ADAM		7	26	25					58
1st	SALIH YOLUC		7	26	25					58
2nd	EMMANUEL COLLARD		25	18	12					55
2nd	FRANÇOIS PERRODO		25	18	12					55
2nd	NICKLAS NIELSEN		25	18	12					55
3rd	BEN KEATING		1	15	18					34
3rd	JEROEN BLEEKEMOLEN		1	15	18					34

MICHELIN FIA WEC RANGE 2019/2020 SEASON

	SLICK Soft - Medium - Hard	HYBRID	WET	FULL WET
LM P1	31/71-18	31/71-18	31/71-18	31/71-18
	SLICK Soft - Medium - Hard	INTERMEDIATES	WET	
LM P2	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	
	SLICK Soft - Medium - Hard	INTERMEDIATE	FULL WET	
LM GTE PRO	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	
LM GTE AM	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	Front: 30/68-18 Rear: 31/71-18	

EXTRACTS FROM THE FIA WEC SPORTING REGULATIONS

Two drivers from each crew must at least set one timed lap in qualifying. The reference for the starting grid (except Le Mans) is calculated on the average of the two fastest lap times (one per driver). If at least two crews set an identical average time, priority is given to the one who set it first.

For the LMP2 category, one of the two timed laps used for the establishment of the grid must be completed by a Silver or Bronze driver.

For the LMGTE Am category, one of the two timed laps used for the establishment of the grid must be completed by a Bronze driver.

Races start after a formation lap.

To be classified, a car must cross the finish line and must have covered at least 70% of the distance covered by the car classified in first place in the overall classification.

POINTS-SCORING SYSTEM 4-HOUR RACES

- 1st - 38 points
- 2nd - 27 points
- 3rd - 23 points
- 4th - 18 points
- 5th - 15 points
- 6th - 12 points
- 7th - 9 points
- 8th - 6 points
- 9th - 3 points
- 10th - 2 point
- +10th - 1 point

Pole position: +1 point
Drivers and Manufacturers

For all the above classifications, an additional point will be awarded, at each Competition, to the "pole position" team in each category (best time achieved by the car in each category during qualifying with the exception of additional cars), as well as to all the drivers making up the crew of the car concerned.

FIA WEC TYRE REGULATIONS

6.5 TYRES

6.5.1 Definitions and general conditions

Each tyre must be identified by RFID and barcode. All references must be declared to the Technical Delegate at least 48 hours before the start of the Competition. This list of designated tyres will be notified to the Stewards at the beginning of the Competition.

All tyres must be identifiable at any time (including when tyres are fitted on the car) via direct measurement by the RFID detection system put in place by the FIA. This includes automatic and manual detection. When tyres are fitted on the car, RFID must be on the outer side of the tyre.

Only in case of malfunction of the RFID system, manual measurement will be handled via barcode identification.

The use of undeclared tyres is prohibited in all Competitions of the Championship.

To allow automatic detection, each car must be equipped with RFID stickers according to Appendix 6. These stickers must be in place at all times during the Competition.

6.5.2 Dry-weather tyres: Declaration of specifications for the season

Tyre manufacturers may declare to the FIA/ACO a maximum of 3 tyre specifications per season, which will be frozen for the duration of the season. 2 of them must be declared at least 48 hours before the first Competition of the season.

Specifications break down as follows:

- LMP1 H, LMGTE Pro, LMGTE Am: 3 specifications per car model
- LMP1 NH, LMP2: 3 specifications for all models of cars entered in the category.

6.5.3 Dry-weather tyres: Declaration of specifications for the Competition

At the latest 48 hours before the beginning of any given Competition, tyre manufacturers must declare to the Technical Delegate 2 (or 3 if applicable) of the tyre specifications described in Article 6.5.2) to be used by Competitors during the Competition, to the exclusion of any other.

Tyre specifications are limited to 2 for Competitions comprising a race of 12 hours or less and to 3 for Competitions comprising a race of more than 12 hours.

6.5.5 Dry-weather tyres: collection and reintroduction (LMP1 H, LMP1 NH and LMGTE Pro only)

Collection:

At the latest the day before the beginning of the first Competition, the Technical Delegate will segregate tyres per specification and per car model which will have to be reintroduced in all the following Competitions of the Championship.

Segregation will proceed as follows:

For the first 2 specifications declared before the first Competition of the season:

- Segregation of 1 set* of tyres per specification per car model and per Competition comprising a race of 6 hours (or less)
- Segregation of 2 sets* of tyres per specification per car model and per Competition comprising a race of 6 hours or greater but less than 24 hours.
- Segregation of 3 sets* of tyres per specification per car model and per Competition comprising a race of 24 hours.

* A set of tyres is a set of 4 tyres made up of 2 front tyres and 2 rear tyres.



If the third specification is declared at the same time as the first two, it will be part of the segregation process described above. After segregation, the Technical Delegate will communicate to the tyre manufacturer the full list of segregated tyres for the full season.

If the third specification is declared after the first Competition, the same segregation process will be applied taking into account the number of Competitions remaining in the season.

After segregation, the Technical Delegate will communicate to the tyre manufacturer an update of the list of segregated tyres.

Tyres to be reintroduced must not be part of the references declared by tyre manufacturers to the Technical Delegates before each Competition.

Reintroduction:

From the second race Competition, at the latest 24 hours before the start of the race, the Technical Delegate will transmit to the Competitors and tyre manufacturers the list of tyres for re-allocation, mentioning the number of the car on which each tyre is to be used. This list will be notified to the Stewards.

Each Competitor is responsible for the reintroduction of tyres, and must do so in compliance with these regulations.

Each tyre must be reintroduced on the first use of new tyres of the specification concerned during the race.

6.5.6 Wet-weather tyres: declaration of specifications for the season

Tyre manufacturers must declare wet-weather tyre specifications as listed below. Any specification will be frozen for the season and must be declared to the Technical Delegate at the latest 48 hours before the first Competition of the season. A drawing of the declared specifications must be sent with the declaration (digital format and on 1:1 scale tracing paper).

- LMP1 H: 1 intermediate and 2 wet specifications per car model
- LMP1 NH: 1 intermediate and 2 wet specifications for all models of cars entered in the category
- LMP2: 1 intermediate and 1 wet specification for all models of cars entered in the category
- LMGTE Pro / LMGTE Am: 1 intermediate and 1 wet specification per car model

6.5.7 Wet-weather tyres: declaration of specifications for the Competitions

The number of wet-weather tyre specifications usable during a Competition is not limited, subject to the provisions of Article 6.5.6

6.5.8 Wet-weather tyres: allocation

Unless specifically authorised in the present Regulations, wet-weather tyres may be used only after the track has been declared wet by the Clerk of the Course / Race Director.

The number of wet-weather tyres usable during a Competition is not limited.

6.5.9 Tyres used to join the starting grid

Tyres used for going from the pits to the starting grid before the race may be either wet-weather or dry weather tyres and will not be counted in the allocation of tyres.

6.5.10 Change of tyre manufacturer during the season

A change of tyre manufacturer is not allowed during the season for the LMGTE Pro and LMGTE Am categories. It is allowed only once for the LMP1 H, LMP1 NH and LMP2 categories.

6.5.11 Specific sessions

During a Competition, if a specific test session (e.g. Safari circuit) is organised by the Promoter of the Competition, conditions regarding tyre limitation and declaration will not be applied.

6.5.12 Grooving and regrooving

Grooving tyres is strictly prohibited. The regrooving of the tyres is not allowed in LMP2 and LMGTE Am. The regrooving of tyres is allowed in LMP1 H, LMP1 NH and LMGTE Pro.

6.5.13 Exchange of commercial tyres (for the LMP2 category only)

Each tyre manufacturer may be given used tyres, used during a Competition, of the other manufacturers in their category. This applies to both dry-weather and wet-weather tyre specifications.

Tyre exchange is to be done with the support and confirmation of the Technical Delegate.

Exchange of new tyres (applicable for dry-weather and wet-weather tyres):

Any tyre specification declared for the Championship must be exchanged at the first Competition during which it is introduced.

This process may be repeated only once per season, at the 24 Hours of Le Mans.

Exchange of used tyres (applicable for dry-weather and wet-weather tyres):

A full set of tyres, used during the race, may be exchanged between tyre manufacturers.

This process may be repeated at every race in the Championship (upon request from a tyre manufacturer during the Competition). The exchange is to be notified within 1 hour after the end of the race.

6.5.14 Applicable Penalties

Penalty for breaching the tyre rule: 3-minute Stop & Go per infringement.

PIT STOP REGULATIONS

12.5 Safety and obligations during wheel/tyre changes

12.5.1 Where wheel/tyre changes are authorised

Wheel/tyre changes are authorised only:

- On the starting grid up to the "3 minutes" board
- In the working area in front of the car's pit, on the conditions defined by Article 12.3
- As an exception, the tyres may be changed inside the garage if and only if the car has been pushed there for the purpose of carrying out mechanical operations on it. This dispensation of the established principle will be interpreted restrictively
- On the track during the suspension of a race according to Article 14.3.

12.5.2 Obligations of the mechanics

For a wheel change, mechanics must:

- bring a maximum of two pneumatic wheel guns into the working area,
- without external assistance, take the new wheels, fit them on the car and put the replaced ones between the garage and the 2.5 m line or inside the garage,
- carry at all times the detached wheels when they are outside the garage. However, in order to facilitate the wheel changes, it is possible to lay them flat on the ground near the car just during the change of the wheel concerned,
- not throw the wheels or drop them,

- disconnect the air jacks and take the equipment back behind the 2.5 m line.

At no moment beyond the 2.5 m line may wheel(s), wheel gun(s), bodywork or any other equipment be left unattended by one of the four mechanics.

The area situated between the painted line in front of the pit shutter and the 2.5 m painted line may be used for tyres and the tools necessary for these operations. No assistance may be given by a person standing in that area.

For any wheel that the mechanics lose control of, or for any other infringement of the present article: penalty at the Stewards' discretion.

12.5.3 Restrictions concerning equipment

It is prohibited to have any equipment:

- For speeding up the removal of the wheels. Only two wheel guns or two pneumatic torque wrenches are authorised per car in the working area at any given time. A maximum of 2 different pneumatic wheel guns can be used during a wheel change to change the tyres.
- For warming the tyres and/or keeping them at constant temperature in the working area, in the garage and on the starting grid. (see Article 12.1.2) Penalty in case of infringement: at the Stewards' discretion.
- Which is operated using an external power source (electrical, pneumatic, etc.), with the exception of the two wheel guns and the air-jack coupling.