

RACECARD

2019/2020 MICHELIN FORMULA-E



**SATURDAY,
FEBRUARY 15**

ROUND 4

2019/2020 ABB
FIA FORMULA E
CHAMPIONSHIP

ROUND 3

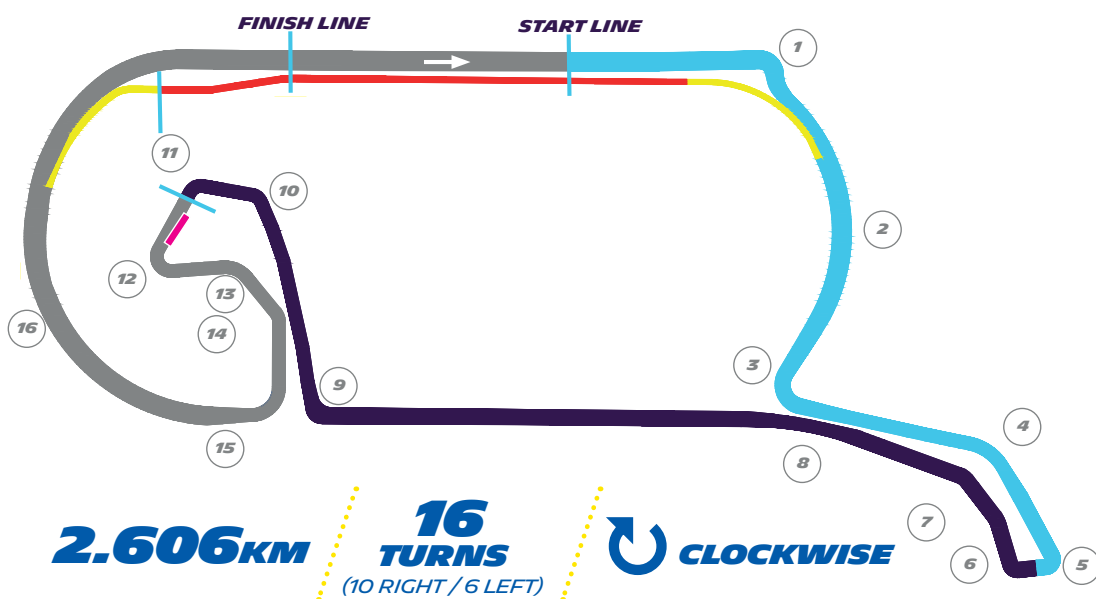
JAGUAR I-PACE E-TROPHY

AUTODROMO
HERMANOS RODRIGUEZ
MEXICO



CBMM NIOBIUM MEXICO CITY E-PRIX

5th RUNNING



THE CIRCUIT

The highest altitude visited in the season (2,200 metres)
The e-prix track uses part of the F1 circuit
Main features: the season's only permanent circuit / a long new section

TIMETABLE

FRIDAY, FEBRUARY 14		
1:10pm	Shakedown - Jaguar I-Pace eTrophy	20 minutes
3:50pm	Free Practice - Jaguar I-Pace eTrophy	40 minutes
5:00pm	Shakedown - Formula E	15 minutes
SATURDAY, FEBRUARY 15		
7:30am	Free Practice 1 - Formula E	45 minutes
8:35am	Qualifying - Jaguar I-Pace eTrophy	30 minutes
10:00am	Free Practice 2 - Formula E	30 minutes
11:45am	Qualifying	36 minutes
12:30pm	Super Pole	20 minutes
2:05pm	Race - Jaguar I-Pace eTrophy	25 minutes + 1 lap
4:04pm	Mexico City E-Prix	45 minutes + 1 lap
5:00pm	Podium ceremony	

THE 2019 RACE

WINNER
Lucas di Grassi
(Audi Sport Abt Schaeffler), 45 laps



POLE POSITION
Pascal Wehrlein
(Mahindra Racing),
59.347s

FASTEST RACE LAP
Pascal Wehrlein
(Mahindra Racing),
1m01.112s

Narrow win for Lucas di Grassi over Pascal Wehrlein who was disqualified after the finish
The race was red-flagged following a crash on Lap 2





THE MEXICO E-PRIX AND SUSTAINABLE ENERGY

Mexico is targeting the use of 35 percent renewable energy in the country's mix by 2024

Mexico has committed to halving its greenhouse gas emissions by 2050

The Magdalena II solar plant, which has been operational for several months, boasts 550,000 solar panels and will generate 640 GWh per year

1,113 electric and hybrid vehicles were sold in Mexico in July 2019, an increase of 86 percent over July 2018

Production of the new Ford Mustang Mach-E begins this year in Mexico

GREEN GUIDE

The MICHELIN Green Guide Mexico is the ideal companion to discover this diverse country, from its pre-Colombian attractions and exotic beaches to its colourful Indian markets, traditional fiestas, colonial towns and tentacular capital.



MICHELIN FACTOID

Fifteen different drivers have won at least one Formula E e-prix on Michelin tyres since the championship's creation in 2014. The most successful is Sébastien Buemi (13 wins)



JÉRÔME MONDAIN,
Formula E Programme Manager,
Michelin Motorsport

IT'S THE ONLY RACE THAT TAKES PLACE AT A CONVENTIONAL PERMANENT CIRCUIT

"This a race apart on the calendar because it's the only one that takes place at a conventional permanent circuit and not on city streets. You get more grip there compared with the norm and wear rates are unlikely to be high, but the cars' aerodynamics provide

less downforce due to the altitude. Two chicanes have been removed and the circuit has been lengthened between Turns 3 and 8 since last year. This section is entirely new. There is a short portion of relatively bumpy concrete where the cars exit the stadium."

MICHELIN AND THE 2020 MEXICO E-PRIX

MICHELIN PILOT SPORT



Developed specifically for the FIA Formula E Championship

The first 18-inch single-seater racing tyre

The first single-seater racing tyre capable of competing in dry and wet conditions

The first tyre capable of lasting an entire race meeting

Size (front/rear) Front: 245/40 R 18 / Rear: 305/40 R 18

Width (front/rear) 245mm / 305mm

Tread width (front/rear) 240mm / 270mm

Side wall height (front/rear) 98mm / 122mm (i.e. 40 percent of tread width)

Rim diameter 18 inches

Weight (front/rear) Front: 8kg / Rear: 10kg

Type of tread pattern Asymmetric, non-directional

Usage Circuits, street circuits, asphalt, concrete, wet or dry weather

Number of tyres taken to each race 192 (24 cars x 8 tyres)

Weight saving per set of four tyres 9kg for 4 tyres (season 6 vs season 1)

Embedded Michelin tyre monitoring sensors (TMS) Automatic transmission of encrypted tyre pressure data





MICHELIN PILOT SPORT

THE REVOLUTIONARY MICHELIN PILOT SPORT: LIGHTER AND MORE ENERGY-EFFICIENT THAN EVER

A REVOLUTIONARY RACING TYRE, IN MORE WAYS THAN ONE!

Developed specifically for the world's first all-electric single-seater motor racing championship, the new MICHELIN Pilot Sport is an exceptionally versatile tyre that was designed by Michelin Motorsport's engineers to cover the entire race day (free practice, qualifying, race), whatever the weather, as required by the technical regulations that govern the series.

Another exceptional characteristic of the tyre is its size. The MICHELIN Pilot Sport was effectively the first ever single-seater tyre to feature an interior diameter of 18 inches, a disruptive concept put forward by Michelin Motorsport and approved by the FIA (Fédération Internationale Automobile). The fact that 18-inch wheels have become a common

feature of road cars enables Michelin Motorsport's engineers and chemists to carry over the lessons they learn on the racetrack to everyday tyres, in keeping with the firm's 'track to street' policy.

The MICHELIN Pilot Sport (front: 245/40 R 18 / rear: 305/40 R 18) is tall and narrow in the interests of energy efficiency, which equates to longer range. Its low sidewalls also flex less, resulting in the generation of less heat, which in turn means reduced energy consumption, a valuable benefit for Formula E's latest-generation 'Gen2' Spark SRT 05Es.

The MICHELIN Pilot Sport is a connected tyre, too, thanks to an embedded RFID chip which facilitates tracking, from production through to recycling.



MICHELIN PILOT SPORT: THE WINNING TYRE RANGE



For track use

For road and occasional track use

For road use

For road use

FRONT

Size

24/64-18 equivalent to 245/40 R 18

Side wall height

98mm



Usage

Wet or dry weather

Type of tread pattern

Asymmetric, non-directional

Rim diameter

18 inches



REAR

Size

27/68-18 equivalent to 305/40 R 18

Side wall height

122mm

FORMULA E: A LABORATORY FOR INNOVATIONS LIKE MICHELIN'S CONNECTED SOLUTIONS, TOO!

The 2019/2020 FIA Formula E Championship sees Michelin introduce Michelin Track Connect. This unprecedented technology uses a Michelin designed and developed sensor embedded in its Pilot Sport Formula E tyres to monitor pressures automatically, with no human intervention.

The data it collects is transmitted directly to the FIA in encrypted form. **While the system addresses a requirement of the championship's technical regulations, Formula E will also allow Michelin to:**

- Incubate and develop connected solutions in extreme conditions for the benefit of current and future Michelin Track Connect customers,
- Extend its expertise in the realm of data acquisition and analysis with a view to applying it to other fields and responding to consumer and market demand.

Connected mobility technology fits perfectly with Groupe Michelin's approach to sustainable mobility.

MICHELIN TRACK CONNECT



ENTRY LIST MEXICO E-PRIX

AUDI SPORT ABT SCHAEFFLER FORMULA E TEAM AUDI E-TRON FE06

CHAMPION
2016/2017



N°11 Lucas di GRASSI (BRA)
Races: 61 Fasted race laps: 6
Victories: 10 Podiums: 31
Pole positions: 3



N°66 Daniel ABT (DEU)
Races: 61 Victories: 2 Fasted race laps: 8
Podiums: 10
Pole positions: 2



ENVISION VIRGIN RACING AUDI E-TRON FE06



N°2 Sam BIRD (GBR)
Races: 61 Fasted race laps: 5
Victories: 9 Podiums: 18
Pole positions: 5



N°4 Robin FRIJNS (NLD)
Races: 38 Fasted race lap: 0
Victories: 2 Podiums: 5
Pole positions: 0



BMW I ANDRETTI MOTORSPORT MW IFE.20



N°28 Max GÜNTHER (DEU)
Races: 13 Fasted race lap: 0
Victory: 1 Podium: 1
Pole position: 0



N°27 Alexander SIMS (GBR)
Races: 16 Fasted race lap: 0
Victory: 1 Podium: 2
Pole position: 3



GEOX DRAGON PENSKE EV-4

ROOKIE



N°6 Brendon HARTLEY (NZL)
Race: 3 Fasted race lap: 0
Victory: 0 Podium: 0
Pole position: 0



ROOKIE



N°7 Nico MULLER (CHE)
Races: 3 Fasted race lap: 0
Victories: 0 Podiums: 0
Pole positions: 0



DS TECHEETAH DS E-TENSE FE20

CHAMPION
2017/2018
et 2018/2019



N°25 Jean-Eric VERGNE (FRA)
Races: 59 Fasted race laps: 4
Victories: 8 Podiums: 20
Pole positions: 9



N°13 Antonio Felix DA COSTA (PRT)
Races: 57 Fasted race lap: 2
Victories: 2 Podiums: 6
Pole positions: 1



MAHINDRA RACING MAHINDRA M6ELECTRO



N°64 Jérôme D'AMBROSIO (BEL)
Races: 61 Fasted race laps: 2
Victories: 3 Podiums: 9
Pole positions: 2



N°94 Pascal WEHRLEIN (DEU)
Races: 15 Fasted race laps: 2
Victory: 0 Podium: 1
Pole position: 1



ENTRY LIST MEXICO E-PRIX

MERCEDES-BENZ EQ FORMULA E TEAM MERCEDES-BENZ EQ SILVER ARROW 01



N°5 Stoffel VANDOORNE (BEL)
Races: 16 Fasted race lap: 0
Victory: 0 Podium: 3
Pole position: 1



ROOKIE

N°17 Nyck DE VRIES (NED)
Race: 3 Fasted race lap: 0
Victory: 0 Podium: 0
Pole position: 0



PANASONIC JAGUAR RACING JAGUAR I-TYPE IV



N°20 Mitch EVANS (NZL)
Races: 40 Fasted race lap: 1
Victory: 1 Podiums: 5
Pole position: 2



ROOKIE

N°51 James CALADO (GBR)
Race: 3 Fasted race lap: 0
Victory: 0 Podium: 0
Pole position: 0



NIO 333 FE TEAM NIO FE-005



N°3 Oliver TURVEY (GBR)
Races: 50 Fasted race lap: 0
Victories: 0 Podium: 1
Pole position: 1



ROOKIE

N°33 Qing Hua MA (CHN)
Race: 3 Fasted race lap: 0
Victory: 0 Podium: 0
Pole position: 0



TAG HEUER PORSCHE FORMULA E TEAM PORSCHE 99X ELECTRIC



N°36 André LOTTERER (DEU)
Races: 28 Fasted race laps: 3
Victory: 0 Podiums: 5
Pole position: 1



N°18 Neel JANI (CHE)
Races: 5 Fasted race lap: 0
Victory: 0 Podium: 0
Pole position: 0



NISSAN E.DAMS NISSAN IMO2

CHAMPION
2015/2016



N°23 Sébastien BUEMI (CHE)
Races: 59 Fasted race laps: 7
Victories: 13 Podiums: 25
Pole positions: 14



N°22 Oliver ROWLAND (GBR)
Races: 17 Fasted race lap: 1
Victory: 0 Podiums: 2
Pole positions: 3



VENTURI RACING MERCEDES-BENZ EQ SILVER ARROW 01



N°19 Felipe MASSA (BRA)
Races: 16 Fasted race lap: 0
Victory: 0 Podium: 1
Pole position: 0



N°48 Edoardo MORTARA (CHE)
Races: 25 Fasted race lap: 0
Victory: 1 Podiums: 3
Pole position: 0



FIA FORMULA E

DRIVERS' STANDINGS

		 SAU 22/11	 SAU 23/11	 CHL 18/01	 MEX 15/02	 MAR 25/02	 CHN 21/03	 ITA 04/04	 FRA 18/04	 KOR 09/05	 IDN 06/06	 DEU 21/06	 USA 11/07	 GBR 25/02	 GBR 26/02	TOTAL des POINTS
1	 STOFFEL VANDOORNE 	15	15	8												38
2	 ALEXANDER SIMS 	7	28	0												35
3	 SAM BIRD 	26	0	2												28
4	 MAXIMILIAN GÜNTHER 	0	0	25												25
5	 LUCAS DI GRASSI 	0	18	6												24
6	 OLIVER ROWLAND 	12	10	0												22
7	 ANTONIO FÉLIX DA COSTA 	0	3	18												21
8	 MITCH EVANS 	2	0	19												21
9	 ANDRÉ LOTTERER 	18	0	0												18
10	 EDOARDO MORTARA 	6	12	0												18
11	 NYCK DE VRIES 	8	0	10												18
12	 PASCAL WEHRLEIN 	0	0	12												12
13	 ROBIN FRIJNS 	10	0	0												10
14	 JAMES CALADO 	0	6	4												10
15	 DANIEL ABT 	0	8	0												8
16	 JEAN-ERIC VERGNE 	0	4	0												4
17	 FELIPE MASSA 	0	0	2												2
18	 JEROME D'AMBROSIO 	2	0	0												2
19	 BRENDON HARTLEY 	0	2	0												2
20	 NICO MÜLLER 	0	0	0												0
21	 SÉBASTIEN BUEMI 	0	0	0												0
22	 OLIVER TURVEY 	0	0	0												0
23	 NEEL JANI 	0	0	0												0
24	 QING HUA MA 	0	0	0												0

REGULATIONS

2019/2020 ABB FIA FORMULA E CHAMPIONSHIP

CARS (SINGLE-SEATERS)

- » Spark STR-05e / chassis: Dallara / battery: McLaren Applied Technologies
- » Maximum length: 5,200mm
- » Maximum width: 1,800mm
- » Maximum height: 1,250mm
- » Minimum weight: 900kg, including driver and battery and/or capacitor (maximum: 280kg)
- » Maximum power, electric powertrain: 250kW (335hp) for free practice and qualifying, 200kW (270hp) during races.
- » Gearbox: six speeds maximum
- » Only 1 MGU may be used
- » Allocation per race number: 2 electric motors, 2 gearboxes, 2 inverters and 1 battery pack for the season

TYRES

- » A single type of tyre (pattern and construction)
- » No mid-race tyre changes
- » Allocation of 4 new front tyres and 4 new rear tyres per race number per event
- » All tyres are returned to Michelin after every event
- » In the case of a puncture during a practice session, the use of a marked tyre is authorised
- » Can be inflated using air only
- » Minimum tyre pressures are checked before qualifying and before races
- » In the case of a 'Wet Track', tyre pressures may be adjusted in parc ferme
- » Tyres must remain visible in the team garages at all times
- » Tyres are identified by RFID chips
- » Tyre warmers not authorised

POINTS-SCORING SYSTEM

Race result: 1st, 25 points • 2nd, 18 points
3rd, 15 points • 4th, 12 points • 5th, 10 points
6th, 8 points • 7th, 6 points • 8th, 4 points
9th, 2 points • 10th, 1 point

Pole Position: 3 points

Fastest drivers in the qualifying groups: 1 point

Fastest race lap: 1 point
(if driver classified inside the top 10).



EVENT FORMATS

- » A **Shakedown** session of a maximum duration of 15 minutes + three laps may be organised the day before the race. Power is restricted to 110kW. A maximum of six laps per car.
- » **Practice:** Two practice sessions (45 and 30 minutes) in the course of the morning of Race Day. Maximum power: 250kW.
- » **Qualifying:** The drivers are divided into four groups of six cars as a function of their championship positions (or of the previous championship order in the case of the season's first race). Each driver has up to two flying laps (only one running at maximum power) to post a qualifying time. The six fastest drivers go on to take part in the Super Pole shootout. Maximum power: 250kW.
- » **Super Pole:** Start order is based on the times posted in qualifying, with the 'slowest driver' to lap first, etc. One flying lap only.
- » **Grid:** The six places at the front of the grid are reserved for the drivers who take part in the Super Pole session.
- » **Race:** Standing start. Maximum duration: 45 minutes + 1 lap. Use of two power outputs mandatory: Normal Mode (200kW / regeneration: 250kW) and Attack Mode (235kW / regeneration: 250kW).
- » **Attack Mode:** Power: 235kW (compared with 225kW in 2018/2019). The number and duration of Attack Mode activations is specific to each race and are notified at least one hour before the start. The cockpit halo lights up when a car is in Attack Mode.
- » **FanBoost:** A temporary 100kJ power boost (minimum: 240kW / maximum: 250kW) for five drivers chosen by a fan vote. To be activated once, but not before the 22nd minute of the race.

