

Formula E starts season 5 in Saudi Arabia with a faster electric race car



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- This weekend sees the start of the 2018/2019 Formula E championship, which begins with the SAUDIA Ad Diriyah ePrix, the first-ever international motorsports race in Saudi Arabia.
- Antonio Felix da Costa of BMW i Andretti Motorsport was the fastest overall during the preseason test at Valencia in Spain.
- British driver Oliver Rowland behind the wheel of his Nissan e.Dams, Nissan IM01 during practice. Nissan has taken over from Renault as the OEM partner with the e.Dams team.

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- Season 3 champion Lucas Di Grassi remains with Audi Sport ABT Schaeffler (as does his teammate Daniel Abt) for this season.

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- Stoffel Vandoorne lost his McLaren F1 drive at the end of 2018, but F1's loss is Formula E's gain as he will be racing with HWA Racelab in the VFE-05. HWA is associated with Mercedes-Benz, which enters the sport along with Porsche next season.

Joe Portlock / LAT Images

- The NIO Formula E Team will race Tom Dillman and Oliver Turvey this season. Here's Dillman in his NIO Sport 004.

Malcolm Griffiths / LAT Images

- This season, Envision Virgin Racing will use the Audi e-tron FE05; previously the team used DS power. Sam Bird (seen here) gave eventual champion Jean Eric Vergne quite a fight all year.

Malcolm Griffiths / LAT Images

- Felix Rosenqvist's Mahindra Racing M5 Electro on track during practice.

Sam Bloxham / LAT Images

- Ex-Formula 1 driver Felipe Massa comes out of retirement to race for the Monegasque Venturi team.

Joe Portlock / LAT Images

- Jean-Eric Vergne (last season's champion) talks to DS Techeetah teammate Andre Lotterer in the pit lane during preseason testing at Valencia.
- Maximilian Günther's Geox Dragon Racing Penske EV-3 brakes after the straight.

Sam Bloxham / LAT Images

- Nelson Piquet Jr. (pictured) and Mitch Evans return to Panasonic Jaguar Racing to race the Jaguar I-Type 3 this season.

Sam Bloxham / LAT Images

- These Jaguar I-Pace cars will contest the I-Pace eTrophy, Formula E's new support series.

- The 2018-2019 Formula E schedule.

Most of the motorsports world takes a well-deserved break in December. The long Formula 1 championship is done, as is the even longer NASCAR season. But this weekend, one series is about to get started: it's time for Formula E, which holds its first race of the 2018/2019 championship on Saturday. This is the fifth season for this electric racing championship, and it represents a new chapter for the sport as Formula E gets all-new cars and adds some new cities to the roster (including this weekend's race, which takes place in Ad Diriyah, Saudi Arabia).

Here at Ars, we've been fans of the all-electric racing series from day one. We were at the first-ever US race in Miami in 2015, and that same year two of the cars even carried our logo at the season finale in London. Since then, we've been regulars at the NYC ePrix, a two-day doubleheader that marks the conclusion of the championship. Electric cars racing on temporary street circuits in city centers represented quite a departure from your average racing series, and it's fair to say that Formula E has had to deal with a lot of skeptics. But we like people who try new things, and, over the course of the past four years, the sport has done a lot to win many naysayers over.

Still, season five feels like a big one. Big-name OEMs like Audi, BMW, Jaguar, Nissan, and DS will all field teams alongside electric vehicle specialists like Nio and Venturi. Mercedes-Benz and Porsche are both waiting in the wings. Here's what's new and what to expect when the green flag waves on Saturday.

New cars

For the inaugural season, each team used completely identical Spark-Renault SRT_01 race cars, but slowly the rules have opened up to allow for some technical development. What is and

isn't allowed is more restrictive than series like Formula 1 or the World Endurance Championship, but these days there's as much freedom to innovate as you'd see in NASCAR or IndyCar. Each team is allowed to design its own motors, gearboxes, and electronics—all areas with direct road-relevance for electric car development—but they will continue to use identical chassis, tires, and batteries to keep the costs down and the racing close.

Formula E first showed off its new car—called the Spark SRT05e—almost a year ago. The gen2 car is a much wilder looking machine than the gen1 racer, but the most significant change is hidden from view deep inside. I am referring to the new battery pack, a 54kWh unit built by McLaren Applied Technologies, with cells developed by Lucid Motors. It's almost double the capacity of the old pack, and, as we'll see, that's going to have a few consequences for how the racing plays out.

The gen2 car is a good deal faster than the old machine, thanks to an increase in the allowed power output. (Check out the video below to see what I mean.) The powertrain layout remains the same, with a single motor feeding the rear wheels via a transmission. Maximum power is now up to 250kW (335hp), with 200kW (270hp) allowed during the race, and the cars can now regenerate up to 250kW under braking. For comparison, last year the cars' max power was 200kW (268hp), with 180kW (241hp) allowed in race mode, and it could only regen 150kW (201hp) under braking.

The new Formula E cars? They will be *fast*.

New rules

Now that the cars have double the amount of energy, those mid-race pit stops to change cars are a thing of the past. (Since this always comes up in the comments, swappable batteries were considered for the gen1 car, but the series decided that such

a system would have added even more weight to an already-heavy car.) But those pit stops added plenty of drama to each ePrix. So the sport has tweaked the race format a bit to leave in some of the uncertainty that makes for exciting racing.

For one thing, races are now no longer a preset number of laps; instead they're to be run to the clock. Each ePrix will last 45 minutes, plus an extra lap once that time elapses. And in addition to the much-maligned fan boost (which only applies to the three drivers who get the most social media support in the lead-up to the race), each driver can—in fact must—use the new Attack Mode during each race. At each track, there will be a different Attack Mode activation zone, a stretch of track off the racing line that drivers have to pass over to turn it on.

This unlocks an extra 25kW (34hp) for a predetermined time. That time will vary at each race, as will the number of times it has to be used. The teams are only given the exact location of the activation zone, as well as the number of times it has to be used and for how long, an hour before the race starts. That's meant to keep everyone on their toes, and it's consistent with Formula E's approach of limiting the amount of data the engineers in the pits have to help their drivers out during each race.

New races

The calendar also looks a little different compared to season four. As mentioned up top, things kick off in Saudi Arabia—the first international motorsports event to be held there. It's fair to say opinion is split over racing there. Over at *Motor Sport*, Joe Dunn wrote a convincing case for not racing in repressive regimes (sadly, that piece is not online). On the other hand, journalist Hazel Southwell made an equally good argument in favor of the event.

Bern, Switzerland, and Sanya, China, are two more new

additions to the calendar, and the Santiago ePrix in Chile will race at a new location. Monaco makes its biennial appearance—this race happens every other year; Formula E and the historic races alternate annually before the famed Formula 1 race takes the streets of this principality. Sadly, the plan to use the full Formula 1 layout has been squashed by the killjoys at the FIA, for reasons that completely elude me. The heavier, less powerful, less grippy electric cars were in no danger of eclipsing the lap times of their vastly more expensive hybrid cousins, and no one makes the classic cars use a shorter layout for that event.

There's also going to be more racing at each ePrix. No, not the return of the slow-but-thrilling Formula E Schools races, unfortunately. Instead, it's the Jaguar I-Pace eTrophy, a one-make series using identical electric Jags. I'm very eager to see how this turns out because these one-make race series often deliver some great action—and also because I'm desperate to have a go in one since the I-Pace actually performs very well on track. (I know you have an extra car for invited drivers at each race, Jaguar, and I'll bring my own helmet and race boots to Brooklyn if you like.)

If you're located in the US, you can watch qualifying for the Al Diriyah ePrix on Fox Sports 2 at 5:30am ET on Saturday (December 15). The race will be broadcast directly afterward at 6:30am ET on Fox Sports 1. For those located elsewhere, consult this handy page to find out your local viewing times and options.

Listing image by Formula E

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