

PRESS KIT

FIA WORLD RALLY CHAMPIONSHIP (WRC)



MICHELIN

MICHELIN: AN IMPORTANT PLAYER IN THE RALLY WORLD



Pascal Couasnon
Director, Michelin Motorsport

Our involvement in the FIA World Rally Championship is a key part of our international motorsport programme. This time last year, the 2017 WRC's opening round – the Rallye Monte-Carlo – was an opportunity for us to celebrate our 50th world title. We have since increased that figure and we start the 2018 season with the same determination to provide our partners with an impeccable service and the safest, most competitive tyres possible. Although the World Rally Championship is open to all tyre manufacturers, we are fortunate to be working with the world's top drivers who acknowledge our expertise. We are very proud of this and it spurs us on to keep working as hard as ever. Our wish is to keep them satisfied while making life hard for our competitors, although I say that humbly and with the greatest respect.

Our approach is identical in the different national championships in which we are active. We provide amateur rally drivers the world over with modern tools, including our My Rally Engineer application which is designed to assist with on-event tyre management and which is poised to evolve considerably in 2018. At the same time, the Michelin Rally Days we organise give drivers a chance to use their own car on a secure stage and benefit from the advice of Michelin's WRC specialists. They also allow us to forge a bond with the drivers who compete on our tyres. This involvement at all levels of the sport testifies to the coherence of our commitment, as well as to our desire to serve and work closely with all parties. For 2018, I wish all our partners and all fans an entertaining World Rally Championship and an abundance of exciting rally action across the world.

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TYRES: A KEY PARAMETER ON THE RALLYE MONTE-CARLO





The Rallye Monte-Carlo is the round of the FIA World Rally Championship that arguably provides competitors with the broadest spectrum of surface types and where tyres can play the most decisive role. It is also the only round where Michelin makes available four types of tyre. A complementary factor to the car/driver package, tyres are a variable that repeatedly make a real strategic difference given the influence of the weather and state of the roads on this event.

A successful transitional season

The 2017 season saw the introduction by the FIA (Fédération Internationale de l'Automobile) of new technical regulations. The resulting latest-generation World Rally Cars are not only more powerful than their predecessors (between 380 and 400 horsepower, compared with 330hp previously), but they also feature more advanced aerodynamics, as well as an active centre differential. As a result, they are more spectacular and deliver higher performance. But this in turn puts additional constraints on tyres. In anticipation, Michelin's engineers took these changes - and the resulting higher cornering and longitudinal (acceleration and braking) forces - into account when developing

the firm's new WRC tyres. These included the MICHELIN LTX Force S5 which was first seen in Mexico in 2017.

"We modified the tread compound of this gravel tyre to cater for the increased efficiency and performance of the new cars," says Jacques Morelli, manager of Michelin's FIA WRC programme. *"If you compare the LTX Force S5 ['S' for 'soft'] with its predecessor, we can assure you that it reaches its working temperature just as quickly, and that is crucial for the early part of stages. It is also more consistent and, above all, performs even longer. Indeed, wear rates are down 20 percent in identical conditions."*

Thanks to this work, Michelin's new WRC tyres delivered a winning cocktail of performance, safety and longevity in 2017 and the LTX Force S5 soon emerged as a favourite with the drivers who were won over particularly by its versatility. It repeatedly proved the most competitive compromise, whether on the barren mountain stages of Rally Mexico, on Finland's sandy, high-speed dirt roads or in muddy Wales. The 2017 season enabled Michelin's partners to collect the data they needed for their decision support software. When it comes to the highly complex process of choosing tyres for a given stage or loop of stages,

the engineers of each partner team benefit from the assistance of a Michelin team advisor.

Michelin's team advisors: a vital role

Michelin's team advisors play a fundamental role throughout the season, both on events and during testing. On rallies, the drivers always have the final word when it comes to tyre choice, but Michelin's team advisors are on hand to provide advice concerning tyre pressures, wear analysis and options thanks to their understanding of the ideal temperature windows of each solution. Their role is consequently particularly important on the Rallye Monte-Carlo which can feature a variety of conditions in the course of a single day, and sometimes even on a single stage.

After events, on their return to their base in Clermont-Ferrand, France, Michelin's team advisors share the data and information they collect with their colleagues who use it not only to improve the firm's competition tyres, but also to contribute to the development of new road tyres. Michelin effectively uses all the types of motorsport in which it competes as life-size laboratories.

The 2018 Rallye Monte-Carlo: What's new?

The route of this year's Rallye Monte Carlo differs slightly to that of 2017 but the altitudes visited will be very similar. Given the amount of snow that has fallen in recent weeks, plus the fact that the rally is taking place a week later, it is unclear what the conditions will be like. In

terms of the stages themselves, SS1 will again start after darkness, although this time it is the famous Sisteron-Thoard test, used in the opposite direction to the classic's normal format (Thoard-Sisteron). SS2 will also run at night-time but the teams' safety crews will cover it in daylight, so there could be some surprises in store... Friday's SS3/SS7 visits a selection of roads that haven't been used in recent years, while SS4/SS8 ends at Col de Saint-Jean which the drivers know well as a testing venue. SS9 is entirely new.

Saturday's terrain will be more familiar to crews, but snow is a strong probability in the Dévoluy region. The loop's second test even passes through a ski resort (Ancelle) which currently boasts good snow cover. As in 2016 and 2017, Sunday's programme will feature the traditional Col de Turini and the Power Stage will use part of the 2016 route.

Specific features of the Rallye Monte-Carlo

Although the route of the 2017 Rallye Monte-Carlo is 85 percent new compared with last year's programme, its overall format is quite similar, with a total distance of 1,411.79 kilometres, including 382.65km divided into 17 stages in the southern French Alps.

When choosing their tyres, the drivers base their decisions on their own experience of the event, while also taking into account the data collected during pre-rally testing and, of course, the recommendations of Michelin's team advisors.



MICHELIN'S TYRES FOR THE 2018 RALLYE MONTE-CARLO



FOR THE 2018 RALLYE MONTE-CARLO, MICHELIN'S PARTNERS WILL BE ABLE TO CHOOSE FROM FOUR DIFFERENT TYPES OF TYRE, INCLUDING TWO NEW TYRES:

DRY GROUND:

The MICHELIN Pilot Sport S6

(S= soft):

This tyre replaces the MICHELIN Pilot Sport S5 which was introduced in 2015 for use on dry asphalt at temperatures of less than 10°C, as well as in wet conditions. The MICHELIN Pilot Sport S6 was developed with the tough asphalt rounds like the Rallye Monte-Carlo and the Rallye de France-Tour de Corse in mind. It stands out from its predecessor through its improved warm-up performance at the beginning of stages, along with its enhanced grip on damp ground, without detracting from either its potential in the dry or longevity.



The MICHELIN Pilot Sport SS6

(SS = super soft):

This tyre replaces the former SS5 and is designed for mixed slush/damp asphalt conditions with icy patches at temperatures close to or lower than 0°C. It is also suitable for greasy or frosty road surfaces.

It features a softer compound compared with that of the MICHELIN Pilot Sport S6, but the same casing.

All of Michelin's partner teams carried out comparison tests over the winter break and they were all positively impressed by the performance of Michelin's two new tyres.

Size (MICHELIN Pilot Sport S5 and SS5): 235/40R18 (equivalent to 20/65-18).

SNOW:

The MICHELIN Pilot Alpin A41:

This tyre resembles a conventional winter tyre due to its overall profile and siped tread blocks. Its development – which was carried out in parallel with that of the MICHELIN Pilot Alpin 5 road tyre by a team of engineers from Michelin Motorsport and the Michelin Technology Centre in Ladoux, France – used data gleaned in motorsport and stands out as a prime example of how Michelin carries over the technologies developed in different forms of competition to its road tyres. The WRC tyre features a reinforced casing and was designed to withstand the constraints generated by the world's top rally cars on snowy ground, while at the same time delivering a very high level of traction, cornering control and braking performance.

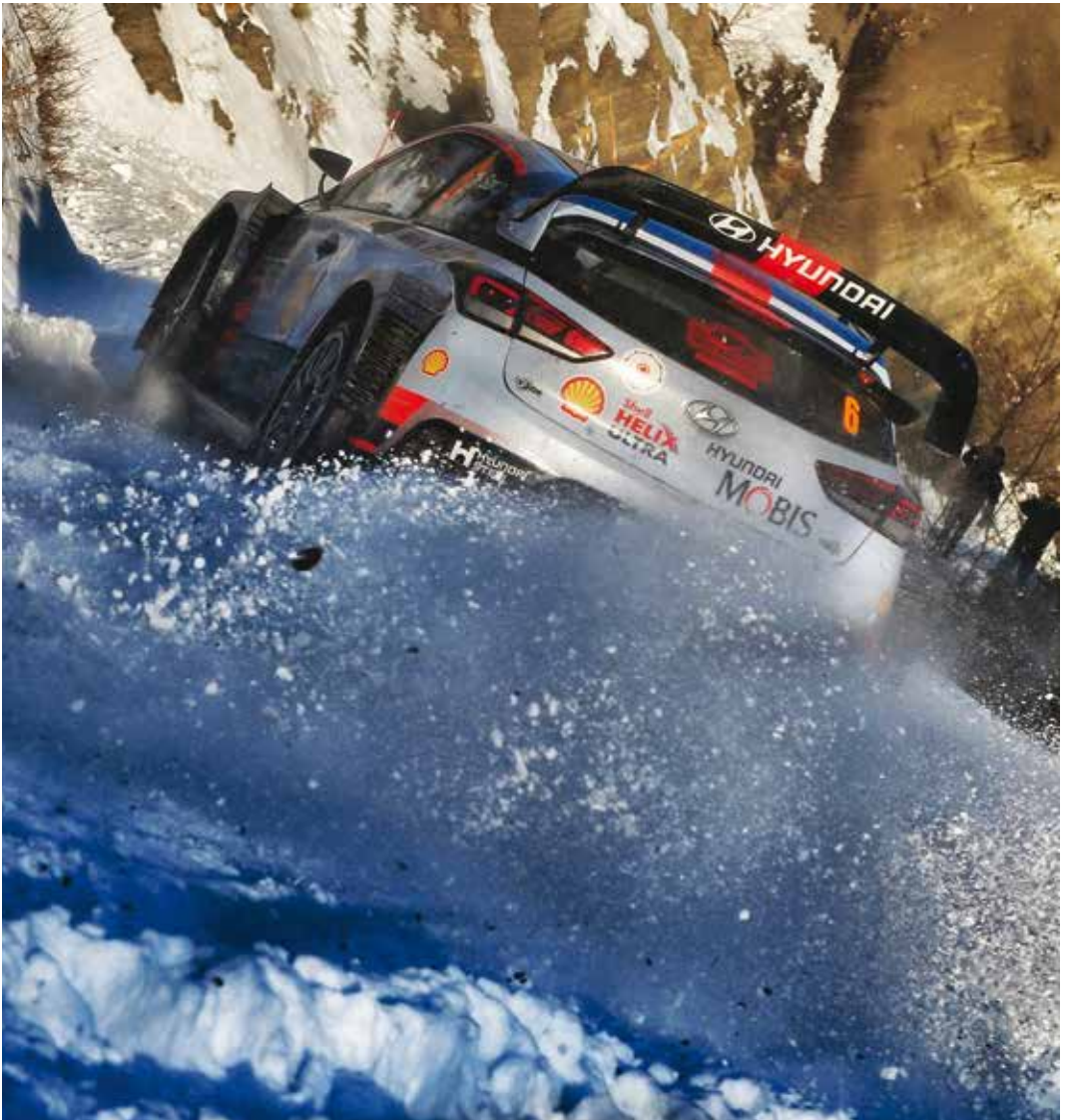
Size: 215/45R18 (equivalent to 18/65-18)



The MICHELIN Pilot Alpin A41 CL:

In Nordic countries, studded tyres are commonplace in winter. However, that is not the case in France where their use is covered by strict legislation. To protect road surfaces during the Rallye Monte-Carlo, the FIA regulations allow the MICHELIN Pilot Alpin A41 CL to be fitted with just 200 studs (compared with 384 for Rally Sweden) and their tips emerge just 2mm from the tread blocks. The MICHELIN Pilot Alpin A41 CL enables drivers to contest ice-covered stages without causing damage to roads. The studs weigh less than 2g each and are inserted into the tread individually using a technique patented by Michelin .

Size: 215/45R18 (equivalent to 18/65-18).



Tyre allocations for the 2018 Rallye Monte-Carlo

The number of tyres available to each driver is capped by the regulations which specify a total allocation as well as a maximum number of tyres that the drivers can actually use from this allocation. The quotas for the Rallye Monte-Carlo are higher than those enforced at other rounds because of the broader spectrum of possible conditions.

The total allocation per WRC drivers on the 2018 Rallye Monte-Carlo is **80 tyres**:

- 20 x MICHELIN Pilot Sport S6
- 24 x MICHELIN Pilot Sport SS6
- 12 x MICHELIN Pilot Alpin A41
- 24 x MICHELIN Pilot Alpin A41 CLs (studded)

During the rally, WRC drivers may use no more **39 tyres from this overall allocation, which is four fewer than in 2017.**

WRC2: BESPOKE TYRES FOR THIS FIERCELY-FOUGHT STEPPING STONE TO WRC





The cars which feature in WRC2 are less powerful and only have two driven wheels. As at WRC level, open competition between tyre companies is authorised and the competition is extremely close. Many WRC drivers have emerged via this class and Michelin has topped the series for the past four years. New cars like the Volkswagen Polo GTI R5 and the Citroën C3 R5 are poised to join the fray this season, and factory Citroën driver Stéphane Lefebvre will contest the entire series in a factory Citroën C3 R5.

For the 2018 Rallye Monte-Carlo, Michelin's WRC2 partners will use tyres that are commercially available and distributed via the brand's competition tyre sales network.

For dry and damp ground, they will be able to count on the performance and versatility of the MICHELIN Pilot Sport R S and MICHELIN Pilot

Sport R SS (S = soft compound / SS = super soft). Their size is the same as the tyres used by the World Rally Cars (235/40R18, equivalent to 20/65-18). For more wintry conditions, drivers will be able to fit the MICHELIN NA00 (snow) or its studded equivalent, the MICHELIN NA00 CL (ice), as was already the case in 2017. Again like the tyres used by WRC competitors, the snow/ice tyre is narrower than the dry/wet weather asphalt tyre (215/45R18, equivalent to 18/65-18).

The allocation for each WRC2 driver on the 2018 Rallye Monte-Carlo is **72 tyres**:

- 16 x MICHELIN Pilot Sport R S
- 20 x MICHELIN Pilot Sport R SS
- 12 x MICHELIN NA00
- 24 x MICHELIN NA00 CL
- During the rally, WRC2 drivers may use no more **37 tyres from this overall allocation, which is four fewer than in 2017.**

MICHELIN'S TYRES AND STAFF ON THE 2018 RALLYE MONTE-CARLO



MICHELIN WILL HAVE 2,226 TYRES AVAILABLE FOR THE RALLYE MONTE-CARLO (WRC: 1,100 / WRC2: 1,116).

MICHELIN WILL HAVE A STAFF OF 23 ON THE RALLYE MONTE-CARLO:



PASCAL COUASNON

Director, Michelin Motorsport



OLIVIER VIALLE

Marketing Director, Michelin Motorsport



JACQUES MORELLI

Manager, FIA WRC Programme, Michelin Motorsport

4 Team advisors

4 Developers

2 Coordinators

9 Fitters

1 Press officer

INTERVIEW
JACQUES MORELLI
**(WRC PROGRAMME MANAGER,
MICHELIN MOTORSPORT)**





What is your analysis of the 2017 World Rally Championship?

Last season marked the introduction of new, more powerful cars with advanced aerodynamic packages and an active centre differential. We predicted it would be a hard year for our tyres, so we dialled in an extra margin during their development. In the end, though, we handled the change more comfortably than expected. As always, we focused on versatility in order to win as many different rounds as possible, as well as the title at the end of the year. In doing that, however, we can't conceal that we left ourselves prone to other manufacturers targeting a given event and even winning it, as we saw in Wales. Even so, our partners won the 12 other rallies which suggests our strategy was a sound one.

What will be new in tyre terms for the 2018 WRC?

To begin with, we will have two new asphalt tyres for the Rallye Monte-Carlo, namely the MICHELIN Pilot Sport S6 and the MICHELIN Pilot Sport SS6. The super-soft Pilot Sport SS6 was developed solely with the Monte Carlo and the cold conditions we are likely to face on the event in mind. The Pilot Sport S6 will also be available for the Tour de Corse, Rallye Deutschland and Rallye de Espana. The testing we did with our partners in December and January was very

encouraging and they are all looking forward to using these tyres competitively.

Also, the regulations may change in the course of the year to permit the availability of a third compound for our gravel tyres, although the details have yet to be finalised. This will enable us to finetune the options we make available to our partners. There will still only be two compounds per event, but they will be tuned even more closely to the expected conditions. Having a choice between a hard, medium and soft compound fits well with the fact that we have events as different as Wales, Sardinia and Argentina. It's more a case of being coherent than looking for extra performance.

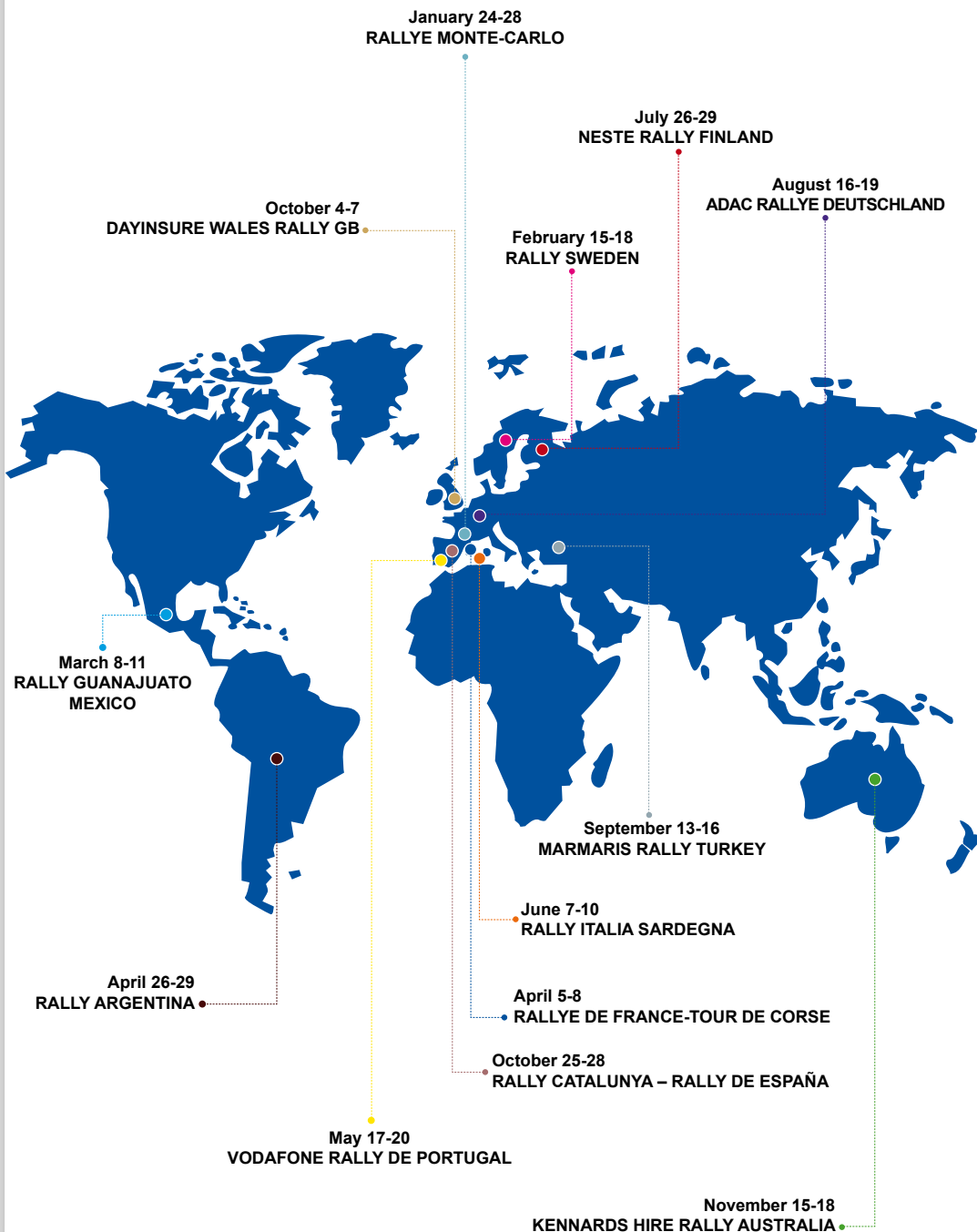
What lessons did you learn in 2017, with regard to both the latest-generation cars and the specification of your tyres?

The fact that the cars were more powerful actually meant it was easier for the drivers to push and they were also less hard on their tyres. We had expected that the new aerodynamics would lead to bigger constraints on tyres, but the teams didn't push too much in this area because they are aware that cars frequently shed bits of bodywork along the way, so they need to driveable even when deprived of an important aero appendage. The 2017 championship reassured us as far as the technical decisions we took and we feel relatively confident for the season ahead.

THE 2018 FIA WORLD RALLY CHAMPIONSHIP CALENDAR



THE 2018 FIA WORLD RALLY CHAMPIONSHIP CALENDAR FEATURES 13 ROUNDS. THAT'S IDENTICAL TO THE CALENDAR CONTESTED IN 2017, ALTHOUGH RALLY TURKEY (SEPTEMBER) HAS REPLACED RALLY POLAND (JULY).





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