

PRESS KIT

THE 2012 RALLYE MONTE-CARLO THE LATEST WRC TYRE REGULATIONS MICHELIN'S NEW WRC TYRE RANGE



MICHELIN

In addition to its share of exciting action, every day of a World Championship rally brings a packed workload. To follow the stages, we frequently need to set our alarm clocks for an early start after working late into the evening. So I understand how finding time to attend a press conference can be difficult at times.

«Yet MICHELIN has so much to say, and so much information to give you! And that is why we have sought to imagine a press kit which reads like a press conference in written form. MICHELIN, the FIA and CEERTA have profited from this document to explain briefly what is new for 2012.

«In addition to a reduction in the number of tyres that can be used during each round of the WRC, crews will be allocated a 'safety' quota of alternative tyres for gravel rallies, while five different types of tyre will be available for the Rallye Monte-Carlo. These are the principal new developments for the 2012 World Rally Championship which promises to be extremely interesting, with tyre strategy and management likely to play important roles.

«Enjoy reading!

Alessandro BARLOZZI
Motorsport Press Relations Manager
Michelin Group

THE 2012 RALLYE MONTE-CARLO... IN 10 FIGURES:

150,000 The number of kilometres that will be covered by the 84 crews on special stages and road sections during the rally.

60,000 The number of spectators expected to visit the service parks in Valence and Monte-Carlo.

38,000 The weight (in kilograms) of the MICHELIN tyres that will be available for the WRC, P-WRC and S-WRC competitors. That's equivalent to the combined weight of their cars!

2,700 The total number of MICHELIN tyres prepared for the 2012 Rallye Monte-Carlo's WRC, P-WRC and S-WRC competitors.

1973 The inaugural year of the World Rally Championship, and MICHELIN's first Rallye Monte-Carlo win as a WRC round.

240 The number of studs in each studded MICHELIN Pilot Alpin WRC tyre (12 studs every 10cm around the tyre's circumference).

110 The temperature (°C) that the MICHELIN Pilot Sport H1 can reach on particularly demanding stages.

45 The maximum number of tyres that competitors on the 2012 Rallye Monte-Carlo may use during the event: five tyres per tyre-change opportunity (eight), plus five tyres for shakedown.

20 The number of MICHELIN and CEERTA staff working on the 2012 Rallye Monte-Carlo.

2 The distance (in millimetres) by which the studs that equip the studded version of the MICHELIN Pilot Alpin WRC are allowed to protrude. The overall length of each stud is 15mm.

FOREWORD

By Nick SHORROCK
Competitions Director, Michelin Group

Just two months have elapsed since the 2011 Wales Rally GB and here we are, already, at the start of the Rallye Monte-Carlo, the most prestigious round of the new season and the year's most demanding test of the drivers and their tyres. After three years away from the calendar, this classic has recovered its place in the World Rally Championship and will kick off a season that sees the introduction of a great deal that is new.

Several evolutions have taken place over the short winter break. First of all, **the latest WRC tyre regulations have led to a reduction of almost 20 percent in the number of tyres competitors may use on each event. Meanwhile, crews will now be authorised to use two types of tyre on gravel rounds.** These changes have been driven by the Fédération Internationale de l'Automobile's determination to see motorsport play a part in paving the way for the mobility of tomorrow. Secondly, **MICHELIN has developed and validated a range of new,** even longer-lasting tyres which deliver greater performance compared to 2011. **Some of these tyres are specific to the Rallye Monte-Carlo.** At the same time, the unfailing commitment of our partner teams has seen them improve their cars and put new, even more efficient organisational structures into place.

The 2012 WRC brings with it a raft of changes, and that speaks volumes for the ability of the sport's key players – from the governing body, to the teams and tyre firms – to learn from the lessons of previous seasons. And this perpetual improvement process can only be positive for safety and performance, as well as for the show that is put on for spectators, in a way that is respectful of the environment.

During the development of MICHELIN's new range for the 2012 WRC, our engineers were able to dial in the results of their analysis of the performance of our 2011 tyres at every round of the championship. **That experience has contributed significantly to ensuring that the latest MICHELIN tyres are even longer lasting, more robust and more competitive.**

MICHELIN's approach to motorsport fits perfectly with our research and development aims, and the new technologies which are validated on stages and race tracks go on to contribute to the safety of all motorists.

The Michelin Group has now taken the notion of technology transfer a step further since, **for the first time, a road tyre – namely the new MICHELIN Pilot Alpin 4,** which will be presented to the press at the end of February 2012 and launched during the second half of the year – **was developed at the same time as its competition equivalent.**

In 2012, MICHELIN will pursue its strategy of **competing in those disciplines which match the firm's vision of motorsport and mobility in the future.** In April, I will be replaced by Pascal Couasnon who will be able to count on the support of a remarkable and enthusiastic team which achieved some outstanding results in 2011.



NEW TYRE REGULATIONS FOR THE 2012 WRC



By Michèle MOUTON
Manager, FIA World Rally Championship

«**W**hen it comes to performance and crew safety, tyres play a crucial role. This is something the Fédération Internationale de l'Automobile is very aware of, and explains why tyres have such a prominent place in the regulations. Indeed, those for the 2012 World Rally Championship are the fruit of work carried out by the FIA during the 2011 season.

Three of the modifications to the championship's sporting regulations that were approved by the World Motor Sport Council have an impact on tyres, namely a reduction in the number of tyres that may be used in the course of each round, the possibility for crews to use two different types of tyre on gravel events and the banning of mixed gravel/asphalt stages. Thanks to these three changes, the FIA has made the World Rally Championship both safer and more respectful of the environment.

The lessons of 2011 enabled the FIA to identify two ways to improve crew safety: the possibility to use two different types of tyre (a soft and a hard compound) on gravel rounds - an option which only existed for asphalt rounds in 2011 - plus the banning of mixed asphalt/gravel stages. The latter measure ensures that the tyre regulations, which call for specific products for each type of surface, are in tune with the characteristics of the different events. The need for these changes became clear to the FIA following fruitful dialogue with the teams, the crews and the championship's tyre suppliers.

In keeping with the commitment made by the FIA in the middle of 2010, when the new WRC tyre regulations were first presented, the number of tyres that may be used during rounds of the 2012 World Rally Championship has been reduced by almost 20 percent compared to last season. Indeed, Priority 1 and 2 drivers may now only use five tyres per tyre-change opportunity, instead of six last year, plus another five for the shakedown. This ruling, which led the championship's tyre suppliers to carry out development work to extend the working life of their products, has produced a doubly positive result, since it reduces the championship's environmental footprint and brings down costs for competitors.

The measures introduced for 2012 to improve crew safety and enhance respect for the environment illustrate not only the sense of responsibility which drives the Fédération Internationale de l'Automobile in its role as world motorsport's governing body, but also the contribution that the sport can make to everyday mobility.



THE 2012 WRC TYRE REGULATIONS IN BRIEF

By Jacques MORELLI
Rally Programmes Manager, MICHELIN

The regulations provide a very clear framework for the use of tyres in the World Rally Championship, and the rules have been made even stricter for 2012 following a further **20 percent reduction in the number of tyres each crew may use in the course of an event**. MICHELIN's response to this change has been to develop a range of tyres that are even more durable and which push the envelope out further still in terms of the performance they deliver and their robustness.

Every time MICHELIN's development experts have achieved gains with regard to the balanced performance package of our products, it has led not only to success for the brand in motorsport, but also to breakthroughs which go on to benefit ordinary motorists.

By promoting the use of rally tyres whose specification is similar to that of road tyres, the FIA has provided MICHELIN with an opportunity to develop products which deliver safer, more lasting performance and which contribute to enhancing mobility.

The tyres we have developed for the 2012 WRC were registered with the FIA at the end of 2011. Their specification will not change in the course of the season, with the exception of **two so-called 'joker card' evolutions**, one of which MICHELIN will be able to use to bring changes to its LATITUDE Cross gravel tyre and the other to its MICHELIN Pilot Sport asphalt tyre. Meanwhile, specific products tailored to match the demands of a particular car manufacturer are not permitted, **although the tyres seen on the WRC cars in 2012 will be what we term 'confidential', by which we mean they cannot be bought over the counter**. This means that we will be able to validate new technologies on stages before they are patented for MICHELIN production tyres. However, S-WRC and

P-WRC competitors will still be able to buy 'catalogue' MICHELIN tyres from specialist retailers if ordered in advance. During rallies, no modifications will be permitted to the tread pattern, while 're-cutting' of treads continues to be prohibited. The regulations also preclude the use of run-flat systems.

A maximum tyre quota is specified for each round. All tyres must be identifiable by a barcode and crews will be able to carry up to two spares. The calculations used for the number of tyres that may be used are as follows:

Priority 1 and 2 drivers: five tyres per scheduled tyre-change opportunity, plus five additional tyres for shakedown (the official pre-rally test session).

Priority 3 drivers (two-wheel drive cars): five tyres per scheduled tyre-change opportunity.

Non-priority drivers (two-wheel drive cars): no restrictions.

Non-priority drivers (four-wheel drive cars): four tyres per scheduled tyre-change opportunity, plus five additional tyres for shakedown.

For 2013, the FIA will reduce tyre quantities by a further 15/20 percent.

Depending on the characteristics of the different surfaces visited by the 13 rounds of the 2012 World Rally Championship, a particular tyre type is nominated for each event. **In the interests of crew safety, the FIA has this year made it possible for crews to use up to 10 tyres of an alternative type (compared to the nominated tyre type) for gravel rounds of the championship**. In 2011, this possibility only existed for asphalt rounds.



MICHELIN'S TYRES FOR THE 2012 WRC...

By **Nicolas GOUBERT**
Competitions Technical Director, Michelin Group

Research and development is an ongoing process at MICHELIN and several factors played a part in the development of the tyres we have produced for this year's World Rally Championship.

The first is the enormous amount of data our engineers were able to collect at each round of the 2011 championship which marked MICHELIN's return to the WRC after a five-year absence. This valuable information included the degree and type of wear, running temperatures and an analysis of the carcasses as a function of each stage's profile, surface type and prevailing conditions.

This work was done in collaboration with our partners, and we have worked with them closely to match our tyres to the latest-generation cars which are both powerful and highly demanding, yet also very different in terms of their design and handling characteristics.

The dialogue between our technicians and the drivers at every event during 2011 proved invaluable, too. It's as though each one of the latter was a MICHELIN test driver. They all brought their ideas and recommendations to the table, based on their personal experience and individual driving style.

This feedback served as a treasure-trove of information which was fed into the design of our new tyres as a function of the latest WRC regulations. Indeed, the new year brings with it a reduction of almost 20 percent in the number of tyres that crews may use during an event, and that's no mean challenge!

Priority 1 and 2 drivers will only be able to use five tyres per tyre-change opportunity (instead of six previously), plus a further five for shakedown. For example, on an event which provides six tyre-change opportunities, plus a pre-start shakedown session, the total quantity each WRC driver will be able to use has come down from 42 to 35 tyres. This measure will reduce the number of tyres that will actually be used over the year by an estimated 3,000 units. That's a huge saving in terms of natural resources and energy, as well as a big reduction in the greenhouse gas emissions associated with their production and transport.

In 2011, MICHELIN signed a partnership agreement with the FIA which included a review of the WRC's carbon footprint, and this factor was taken into consideration during the development of our range for the 2012 championship. Compared to last year, the latest MICHELIN tyres stand out through their longer durability, greater robustness and enhanced performance.



...TYRES FOR THE 2012 RALLYE MONTE-CARLO

The Rallye Monte-Carlo is a long and very specific event which is notorious for the variable weather conditions it can deliver. For safety reasons, the regulations authorise the use of five different types of tyre, all of which are fitted to 18-inch wheels.

For dry and wet asphalt, MICHELIN will provide competitors with the latest MICHELIN Pilot Sport (235/40R18, equivalent to 20/65-18) which comes in a choice of three compounds. In addition to the hard (H1) and soft (S1) options that will be available for the year's other sealed-surface rounds, a specific 'super soft' (SS1) alternative has been developed for the Rallye Monte-Carlo.

Should it snow during the rally, crews will be able to run the new MICHELIN Pilot Alpin WRC (215/45R18, equivalent to 18/65-18). This tyre will be available in

'studded' form for icy conditions. In order to protect road surfaces, the studs must comply with the specification guidelines set out in WRC regulations. Each tyre will be equipped with approximately 240 studs (12 studs every 10cm around the circumference). Only the outer edge of the tread may be equipped with studs, the maximum permitted length of which is 15 millimetres. Two millimetres are allowed to protrude from the tread block, while the other 13 millimetres are embedded in the tyre. Each stud weighs less than two grams.

As for the all the other rounds of the 2012 World Rally Championship, competitors on the Rallye Monte-Carlo will be able to use up to five tyres per tyre-change opportunity, plus a further five for shakedown. These tyres will be selected from the following allocations as a function of the strategy of each team and/or driver:

MICHELIN Pilot Sport S1	→	36 tyres
MICHELIN Pilot Sport H1	→	8 tyres
MICHELIN Pilot Sport SS1	→	12 tyres
MICHELIN Pilot Alpin	→	8 tyres
MICHELIN Pilot Alpin (studded)	→	20 tyres



TYPES AND SIZES OF MICHELIN TYRES AVAILABLE FOR THE 2012 WRC

ASPHALT

Size: **235/40R18 (20/65-18)**

Tyre: **MICHELIN Pilot Sport**

Versions: **H1** (Hard), **S1** (Soft) and **SS1** (Super Soft, specific to the Rallye Monte-Carlo)

Events: Rallye Monte-Carlo, Rallye Deutschland, Rallye de France Alsace and Rallye de Espana (second and third legs)



GRAVEL

Size: **205/65R15 (17/65-15)**

Tyre: **MICHELIN LATITUDE Cross**

Versions: **H1** (Hard) and **S1** (Soft)

Events: Rally Mexico, Rally Portugal, Rally Argentina, Rally Greece, Rally New Zealand, Rally Finland, Rally GB, Rally d'Italia and Rally de Espana (first leg)



SNOW AND ICE

Size: **215/45R18 (18/65-18)**

Tyre: **MICHELIN Pilot Alpin WRC**

Versions: **non-studded and studded**

Events: Rallye Monte-Carlo



Size: **195/65R15 (15/65-15)**

Tyre: **MICHELIN X Ice-North**

Versions: **studded**

Events: Rally Sweden



FROM CLERMONT-FERRAND... TO THE FOUR CORNERS OF THE PLANET



By Agostino « Tchine » TURUANI
Managing Director, CEERTA

As soon as details of the new WRC calendar are released, we study it extremely closely, since CEERTA is tasked with transporting and fitting more than 15,000 MICHELIN rally tyres across the world!

My company has worked for MICHELIN for some years now. **We are responsible for the logistics and organisation associated with contesting the WRC, as well for servicing competitors' needs at all rounds of the championship.**

It is a role which calls for total commitment. MICHELIN is a world-leading company which seeks to consolidate its reputation through the performance of its tyres, as well as through the standard of the service it provides WRC competitors. This is consequently a considerable responsibility for CEERTA which plays an important role alongside MICHELIN.

The way we are organised and operate is tailored to provide a level of service which matches expectations of MICHELIN and the WRC teams...

First of all, our activity can be divided into several different phases which we have ranked as a function of the contribution they make in terms of 'value'. **We understood immediately that the best way to approach our mission was to deal with the different steps in reverse chronological order.** We begin by looking at how we run our on-event service in terms of staffing, infrastructure and equipment. As a function of that, we look at how we get everything to events and how the tyres are stored. **It is at this stage that careful timing is crucial.**

All the Michelin Group's competition tyres are made at its Cataroux factory in Clermont-Ferrand, France. Production planning is optimised by MICHELIN to ensure that the right tyres are available at the right time. Shipping deadlines and constraints are obviously built into the calculation.

For example, the tyres required for mid-June's Rally New Zealand are manufactured before those which will go on the cars in Portugal, at the end of March.

After initially being stored at MICHELIN's own premises as they come off the line, the tyres are taken to our own warehouse in nearby Issoire. Here, they are divided into batches as a function of requirements for each rally and prepared for shipment. They are trucked to European events and sent by ship to overseas rounds.

A number of criteria are taken into account when selecting the best means of transport, including duration, reliability, cost and the minimisation of greenhouse gas emissions. The route preferred by CEERTA's trucks is chosen to reduce fuel consumption and therefore CO2 emissions. Also, all our vehicles are equipped with MICHELIN Energy low fuel-consumption tyres.

At the end of the day, **efficiency** is the word which CEERTA endeavours to live up to, in its overall strategy and day-to-day operations alike: cost efficiency, operational efficiency and energy efficiency... all for the good of the WRC.

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