

2018 FIA World Rally Championship
Round 2/14: Rally Sweden

The MICHELIN X-Ice North 3 for WRC crews, and the new X-Ice North NA01 for Michelin's WRC2 partners

After January's thrilling Rallye Monte-Carlo which kept spectators on their toes all the way to the end of the very last stage, this week's Rally Sweden promises to be just as exciting, although tyres are poised to play a very different role. While crews were able to choose from four different types of tyre during the season's opener, a single, studded option will be available for the WRC's only entirely wintry fixture: the MICHELIN X-Ice North 3.

Rally Sweden is a classic round of the world championship and this year's menu features 19 special stages for a total of 319.17 competitive kilometres and an overall length of 1,466.63km. After Thursday evening's official start ceremony and the first super-special at Karlstad's horse trotting track, Friday's action will take the form of two competitive loops which – with the exception of one stage – will take crews into the forests across the nearby border with Norway. Saturday's menu will visit classic Rally Sweden territory near Hägfors, and Sunday's two attempts at 'Likenäs' and the Power Stage will close proceedings. In fact, there are very few changes compared with 2018 and the service park will again be based at its traditional home near Torsby, about 100km north of Karlstad.

A new Rally Sweden tyre for Michelin's WRC2 partners

Competitors in both the WRC2 Pro (reserved for factory drivers only) and WRC2 championships (privateer teams), will compete on Michelin Motorsport's brand new MICHELIN X-Ice North NA01

This new tyre was developed over a period of several months to meet the specific characteristics of R5 cars and provide Michelin's partners in these two competitions with superior performance on ice and snow. Compared with the WRC tyre, which WRC2 runners used until 2018, the MICHELIN X-Ice North NA01 features a different construction and a bespoke studding pattern, although the number of studs per cover is still 384.

"Rally Sweden is a one-off event in the world championship because it's the only round that takes place entirely in wintry conditions and on studded tyres," says **Arnaud Rémy**, the manager of Michelin's rally programmes. "Despite the snow and ice, the cars reach really impressive speeds thanks to the confidence and outstanding grip that is provided by the almost 400 studs on each tyre. I'm sure there will be plenty of spectators out to see if anybody manages to better Eyvind Brynildsen's record leap of 45 metres over Colin's Crest on 'Vargåsen'! We are naturally keen to see how our new WRC2 tyre performs. Feedback from those drivers who tried the MICHELIN X-Ice North NA01 in pre-event testing was very positive and we have high expectations for it."



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Studding technique

The MICHELIN X-Ice North 3 and X-Ice North NA01 tyres are not equipped with studs when they come out of the factory in Clermont-Ferrand, France. The task of actually inserting the studs into the covers is performed by Michelin's longstanding partner Däckproffsen in Växjö, Sweden. This entirely manual operation is divided into three phases: drilling of the tread blocks, placing glue in the resulting holes and inserting the studs. The 384 steel and tungsten tips fitted to each tyre are 20 millimetres in length but only 6.5 millimetres protrude from the tread. It takes around 45 minutes to complete each tyre. Michelin's WRC partners have a total allocation of 24 tyres for Rally Sweden. The same figure for the brand's WRC2 runners is 22, plus six additional tyres for shakedown in both cases.

Technical data – MICHELIN X-Ice North 3 and NA01

Size: 195/65R15 (equivalent to 15/65-15) / Width: 145mm / Sidewall height: 125mm / Interior diameter: 15 inches.

Tread pattern: asymmetric and directional (i.e. bespoke tyres for the cars' right-hand and left-hand sides) / Number of studs per tyre: 384 (20 per linear 10cm around the circumference, in compliance with FIA regulations) / Overall stud length: 20mm / Protrusion from the tread: 6.5mm / Weight: 4 grams.

Optimal temperature window: -30°C to 0°C

Tyres available for the 2019 Rally Sweden: **1,048** (WRC: 520 / WRC2: 528, including WRC2 Pro)

Michelin's staff for the 2019 Rally Sweden

Michelin will have a staff of 14 in Sweden:

- **Arnaud Rémy** (manager of Michelin's rally programmes)
- 1 developer engineer
- 2 coordinators
- 3 technical team advisors (CTEs)
- 6 fitters
- 1 Press officer



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