



PRESS KIT

June 16, 2014



## MÉGANE R.S. 275 TROPHY-R

### A CONVINCING DEMONSTRATION IN UNDER EIGHT MINUTES

The recently unveiled Mégane R.S. 275 Trophy features the best of Renault Sport technology, with the Renault Sport 2.0T engine upgraded to 275 hp and the Cup chassis. This limited series is now available in a more radical version: Mégane R.S. 275 Trophy-R, designed for track driving enthusiasts. Almost 100 kg lighter, Mégane R.S. 275 Trophy-R is

pinned to the road by a chassis fitted with Öhlins Road&Track adjustable dampers and MICHELIN Pilot Sport Cup 2 tires. The overall coherence is reflected in the exceptional level of performance achieved. As illustrated by a new record at the Nürburgring Nordschleife. Mégane R.S. 275 Trophy-R covered the 20,832 km in just 7'54''36, the fastest time ever for a front-wheel drive production model.

*"At Renault, and Renault Sport in particular, we see new challenges as a driving force for our cars. After the first record broken by Mégane R26.R in 2008, we wanted more, and today we return to Nürburgring regularly to try and improve our performance. This track – no doubt the world's toughest – has become one of our working tools, used extensively for the fine-tuning of Renault Sport vehicles. Today, we are proud to present Mégane R.S. 275 Trophy-R, which becomes the flag bearer of our sporting range. The stopwatch has delivered its verdict: Mégane R.S. 275 Trophy-R delivers a performance worthy of an exclusive GT sports car."*

**Patrice Ratti - CEO of Renault Sport Technologies**

# 01

## MÉGANE R.S. 275 TROPHY-R: RECORD BREAKER

Taking advantage of the technology upgrades gained by Mégane R.S. 275 Trophy, this very special edition pushes the limits of high performance. Almost 100 kg lighter than Mégane R.S. with a Cup chassis and 19" wheels (1,280 kg, compared with 1,381 kg), this hard-core version is even more dynamic and efficient. It features new equipment developed in cooperation with prestigious partners: Akrapovič exhaust system, Öhlins Road&Track adjustable dampers, Allevard composite springs and MICHELIN Pilot Sport Cup 2 tires.



### UNCOMPROMISING LOOKS

The looks of Mégane R.S. 275 Trophy-R are as uncompromising as its technical specification. The two-tone version with Pearlescent White bodywork and an Etoilé black roof is expected to be particularly popular.



The colours that set off the F1-style splitter, stripes and side checkered flag graphics add touches of bright red to the bodywork. The black 19" Speedline Turini wheels, fitted as standard, are also available in red (option). The rear wiper has been removed in order to save another precious kilo. This is the first visible sign of the systematic efforts devoted to making the car lighter.

On board, the Recaro Pole Position bucket seats illustrate the main purpose of Mégane R.S. 275 Trophy-R. These single-piece polycarbonate seats are painted glossy black and upholstered in leather and alcantara. Designed to bring weight savings of 22 kg, they deliver a high level of side support for both the driver and passenger along with "unfiltered" feedback from the track.

Alcantara is also present on the steering wheel and hand brake gaiter, whereas leather is used for the gear lever knob. Available as accessories, Sabelt six-point safety harnesses complete the equipment recommended for track driving.

### THE WAR AGAINST WEIGHT

To meet targets for performance, ride and handling, engineers tracked down every last superfluous kilo. To combine function and pleasure, most of the insulating and absorbing materials (-18 kg) were removed to enable the occupants to take full advantage of the sound made by the Akrapovič exhaust system.

As Mégane R.S. 275 Trophy-R was made for track driving, the rear seat has been removed (-20 kg) to make it a real two-seater. A cross strut bar is provided for the luggage restraint net. Track enthusiasts will appreciate the boot layout, designed to make it easy to carry four spare wheels. To protect the cabin, special wheel covers with the Renault Sport logo are available as accessories.

A further 10 kg has been saved by removing the air conditioning and radio and fitting a simplified central console. However, air conditioning, radio and the Renault R-Link onboard, connected multimedia system are still available as options depending on the country.

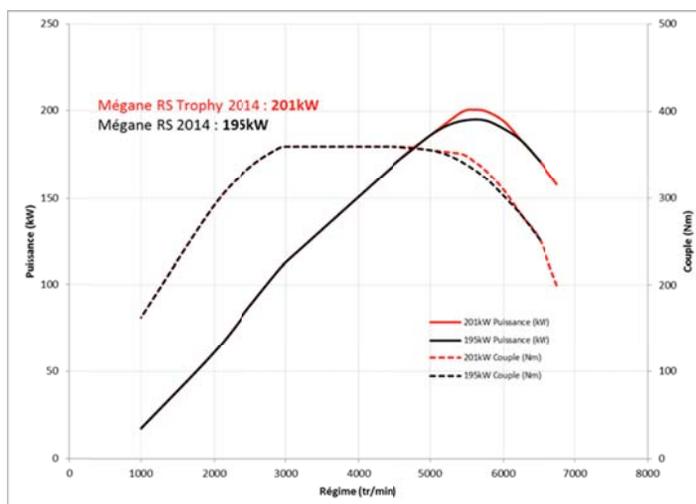


### EVEN MORE POWER WITH THE RENAULT SPORT 2.0T ENGINE

Renault Mégane R.S. 275 Trophy-R comes with the latest upgrades to the Renault Sport 2.0T engine.

Engineers sought to increase torque at peak power of 5,500 rpm by working on the electronic control parameters. By raising torque to 349 Nm (+10 Nm), they boosted engine power to 275 hp (201 kW). Available between 3,000 and 5,000 rpm, maximum torque of 360 Nm remains unchanged. These results can be obtained by selecting Sport or Race modes in R.S. Drive dynamic management system.

The result of these efforts can be seen in the wider torque curve at higher revs. At the wheel, these developments deliver better acceleration in intermediate gears, for less frequent down shifts. This new engine definition has no impact on fuel consumption or emissions which remain contained at 7.5 l/100 km and 174 g/km of CO<sub>2</sub>\*.



\* Homologated consumption based on applicable regulations.

### **A SOUND SIGNATURE BY AKRAPOVIČ**

Among the partners brought together by Renault Sport Technologies for the development of Mégane R.S. 275 Trophy-R, Akrapovič is making its voice heard! Renowned for its work with motorcycles and supercars, the Slovenian firm designed a special exhaust system in partnership with Renault Sport. The titanium exhaust, running from the intermediate silencer to the tail, cuts vehicle weight by 4 kg. The carbon tailpipe trim is also by Akrapovič.

This assembly gives Mégane R.S. 275 Trophy-R a deeper, more raucous sound signature that is sure to thrill engine aficionados!



### **A CHASSIS OF INFINITE POTENTIAL**

Mégane R.S. 275 Trophy-R is based on the Cup chassis, which features a limited slip differential. Designed to improve traction in sports driving, this system delivers dependable efficiency at all times, regardless of grip conditions, driving style or type of curve. The limited slip differential is combined with an independent steering-axis layout, allowing drivers to reap the full benefits of the extra traction for more reassuring handling.

Unanimously recognized as a model of rigor and precision, the Cup chassis takes advantage of the additional potential created by the latest developments from Renault Sport and its partners:

- Öhlins adjustable Road&Track dampers
- Allevard composite suspension springs at the front
- MICHELIN Pilot Sport Cup 2 tires.

### **ADJUSTABLE SUSPENSION FOR CONTROLLED EFFICIENCY ON ALL TYPES OF SURFACE**

New from Öhlins, the Road&Track dampers were inspired by the world of motorsport. Unlike the conventional models with rods, these carefully crafted gems feature a sliding cartridge. This layout reduces the shear forces that can “block” the moving rod.

The new dampers feature DFV (Dual Flow Valve) technology, a major innovation that functions on both rebound and compression. The speed of operation, at both low and high frequencies, keeps the tyre in contact with the ground in almost all circumstances. In the event of heavy usage, the internal bleed valve maintains consistent damping quality even when the fluid heats up.

As requested by Renault Sport, the Öhlins Road&Track dampers are fitted with a hydraulic compression stop at the front. The PDS (Progressive Damping System) provides additional damping capacity at the end of the compression phase, when the car brakes hard or hits a bump.

Drivers can adjust the dampers using the knob on a rig fitted on the damper. An audible click confirms each change. With 20 positions at the front and 30 at the rear, the car adapts precisely to all types of surface and all driving styles.

Drivers can also vary the body height and attitude of Mégane R.S. 275 Trophy-R by adjusting the compression of the Allevard composite springs. These corrosion proof springs have a longer service life. They also reduce vehicle weight by a further 2 kg. Renault Sport is once more demonstrating its avant-garde approach with this solution, which is new on this type of vehicle.

To support inexperienced drivers, online tutorials and set-up sheets will be available on the [www.renaultsport.com](http://www.renaultsport.com) website in the near future. The database will be updated regularly with customer feedback.

## **TYRES ON A PAR WITH THE HIGH-PERFORMANCE CHASSIS**

Even the best chassis is useless without the right tyres to connect it to the road. To address the challenge from Renault Sport, Michelin developed a special version of its MICHELIN Pilot Sport Cup 2. Fitted on many supercars, this high-performance tyre is now available for the first time as standard on a front-wheel drive.

Starting from the suspension settings that are most demanding for tyres, Michelin engineers submitted a number of alternatives to Renault Sport test drivers. Following the tests conducted on several tracks (Nürburgring, Michelin technology centers in Ladoux, Charade and Jerez), a new version was jointly approved.

The characteristics of the MICHELIN Pilot Sport Cup 2 tyre are as follows:

- a tread with Bi-Compound technology, featuring a softer compound on the outside for better grip, and a harder compound on the inside for more precise steering;
- a belt made of aramid fiber – five times more resistant than steel – to control centrifugal force and deliver consistent performance at high speeds;
- Track Variable Contact Patch 3.0® technology, optimizing pressure in the tyre's contact patch to maximize the area in contact with the track;
- a new wider bead to increase lateral stiffness.

The MICHELIN Pilot Sport Cup 2 has all the qualities necessary to take full advantage of the potential of Mégane R.S. 275 Trophy-R: precise steering, stability, grip and sporting performance. To which two further qualities could be added: endurance, for lapping and also with respect to the service life of the casing, and versatility, for safe driving in all weather conditions.

The tyres are mounted on 19" Speedline Turini wheels. This new wheel design, based directly on the world of motorsport, reduces the unsprung weight of the vehicle by 5 kg.

## **BREAKING NEW GROUND IN PERFORMANCE THROUGH A RANGE OF ACCESSORIES**

Renault Sport is bringing purists a range of accessories to boost the technical specifications of their Mégane R.S. 275 Trophy-R to the same level as those of the Nürburgring record-setting version.

Hailing from the world of motorsport, the "Performance" braking kit comprises wider discs – with a diameter of 350 mm, up from the standard 340 mm – mounted on aluminum bowls. Using aluminum reduces the unsprung mass by 3 kg, while the use of wider discs leads to a 100°C reduction in the operating temperature. The result on circuits is greater consistency and heightened pedal feel.

Again to reduce mass, the accessories range includes a lithium-ion battery, weighing in at some 16 kg lighter. The lithium-ion battery is fitted in the same place as the original lead battery.

A "Nürburgring Pack", comprising the "Performance" braking kit, lithium-ion battery, two Sabelt safety harnesses, four spare wheel covers and a retaining strap, will be available at a competitive price.

The Accessories range is available at [www.renaultsport.com](http://www.renaultsport.com).

## **AT THE WHEEL: A CAR THAT PUTS A SMILE ON YOUR FACE**

**Mégane R.S. 275 Trophy-R puts a smile on drivers' faces even before they get inside. Whether heading out to a rain-soaked track or a fast circuit, drivers can adjust their Öhlins damper settings in just a few seconds, like a rally driver before a special stage.**

**The driver's smile gets even bigger when he or she turns on the ignition. The distinctive sound of the Akrapovič tail pipe channels the work of the wizards at Renault Sport. The car's willingness and energy is evident from the very first corners. With its broader torque curve, Mégane R.S. 275 Trophy-R gobbles up the track with little need for downshifts, making it ideal for everyday life and extremely effective in sharp and fast curves on a circuit.**

**Renault Sport's wide-ranging work on weight reduction also contributes to the sea change in the behavior of Mégane R.S. 275 Trophy-R, rivalling that of a real racing car. The car's playful side emerges further as drivers pick up the pace. The scale, sensitive to load transfer, reveals all the potential of the front axle. Try as you might, understeer on dry surfaces is nigh on impossible. The car obviously reaches its limits a little sooner on wet surfaces, but a little lift off the accelerator pedal brings back all of the car's grip – and all the fun that goes with it!**

# 02

## 7'54''36: MÉGANE R.S. 275 TROPHY-R SHOCKS THE CLOCK AT NÜRBURGRING

Mégane R.S. 275 Trophy-R was designed with a big challenge in mind: to set a new record on Nürburgring's northern loop, the legendary Nordschleife. On May 15 at 7.15 am, Renault Sport's driver set off on a 20,832 km route in pursuit of that goal. Seven minutes and fifty four seconds later, the pressure subsided and gave way to joy!

### #UNDER8 OBJECTIVE

Renault Sport set a new Nordschleife lap record of 8 minutes and 17 seconds with Mégane R26.R on June 23, 2008. With the achievement, the Brand showed that a production front-wheel-drive car could rival the performance of GTs. Three years later, on June 17, 2011, Mégane R.S. 265 Trophy shaved nine seconds off the time set by its forerunner. And because records exist to be beaten, the idea of going under the symbolic eight-minute mark gradually began to form at Renault Sport.

On April 16, 2014, the #UNDER8 keyword started to blossom in the social media. The most astute web users were quick to understand the point of the campaign, namely that the experts at Renault Sport Technologies were out to set a new record over the Nordschleife's 20,832 km.

Two main changes were made to the model chosen to take up the challenge, the limited series Mégane R.S. 275 Trophy, whose mass was reduced and chassis potential enhanced. The result: Mégane R.S. 275 Trophy-R!

### NORDSCHLEIFE: THE TOUGHEST CIRCUIT IN THE WORLD

Nürburgring, located in the Eifel mountain range in the heart of Europe, is often considered as the most demanding circuit in the world. Built in the 1920s, the circuit comprised two parts: Nordschleife, the northern loop, measuring 21 km long, and Sudschleife, the southern loop, at 7.5 km long. Nordschleife went on to become a Formula 1 track, hosting Grand Prix races until 1976. Achieving legendary status owing to its unusual character, the circuit is now used for endurance events. Nicknamed "Green Hell", the circuit is open to the public – whatever the vehicle type, even buses! – and has become a highly sought-after testing ground for sports car manufacturers.

The circuit today measures 20,832 km and includes 73 official corners, although some have counted as many as 170. With ultra-fast segments, tight corners, elevation changes and several surface types, Nordschleife is home to every tough driving condition imaginable.

### MISSION ACCOMPLISHED!

For its world record attempt, the Renault Sport squad targeted two days, Wednesday 14 and Thursday 15 May. Because the circuit is open to other carmakers from 8 am on, the time slots are particularly tight and cars have to take to the track between 7.15 am and 7.45 am. In theory, early mornings are far from ideal in terms of track conditions, but the atmospheric pressure at that time of day is conducive to getting the best possible performance out of the engine.

Things looked gloomy for the team on Tuesday evening, as it was raining and temperatures were barely above 5°C. The track was soaking wet on Wednesday morning, making any attempts futile. Conditions were hardly better on Thursday morning, but the track did appear relatively dry.

Laurent Hurgon, the Renault Sport test driver, decided to head out on a reconnaissance mission. The circuit was dotted with wet patches, but nothing that seemed insurmountable. The temperature of the Michelin Pilot Sport Cup 2 tires rose slowly as the driver meticulously noted the right trajectories to take in the most delicate sections, among them the Karussell and Pflanzgarten corners.

Laurent set off as soon as all systems were go. The first section of the Nordschleife circuit is incredibly fast. Travelling at over 190 kph, Mégane R.S. 275 Trophy-R started to skid on a wet patch. With a single move of the wheel, Laurent brought the car back into line. A few tenths of a second were lost, but soon made up for in the most demanding curves.

At the other end of the circuit, the BRM stopwatch was clocking up the seconds. Everyone on hand held their breath as the car gunned toward the finish line. The time displayed was 7'54"36 – and the mission successfully accomplished!

## **LAURENT HURGON: ALL THE PRESSURE OF A QUALIFYING LAP**

### **How do you approach a circuit like the Nürburgring?**

“Since 2008 and the first record set with Mégane R26.R, Renault Sport Technologies has joined the circuit’s Industry Pool, which means that we regularly carry out tests on days reserved for car manufacturers. Nürburgring testing has become an essential step in the development of R.S. range models. I’ve driven several thousand kilometers here now, so I know the circuit by heart. But I remain as humble as ever in the face of a monument like this.”

### **How did you feel about the new record-setting venture?**

“The pressure was certainly on, especially since the track conditions were far from ideal. When the moment comes, the concentration required is similar to that for a qualifying lap, and you have to block out everything around you. The competition between the carmakers attempting to set records is so tough that the smallest driving mistake can cost you dearly at the end of the lap! Breaking the eight-minute barrier was in no way a given, and we put in a tremendous amount of work, on the car, but also on my driving. I spent a lot of time on R.S. Replay, a simple yet extremely powerful analysis tool based on the data acquired by the R.S. Monitor 2.0. R.S. Replay can be used to obtain a great deal of information, particularly on gear changes in corners. I obviously felt proud about the new record. Beyond my own personal satisfaction, the performance benefits Renault as a whole.”

### **Did you do a perfect lap?**

“I don’t think that’s possible at Nürburgring! The faster you go, even if it’s only for a second or two, the more you feel like you’re seeing the circuit in a new light. The corners come one after another and each one is a continuation of the last, so you’re always up against new problems. At any rate, I did my best and didn’t make any mistakes. So I’d say it was a good lap!”

### **Is the new record a measure of the progress made on sports cars?**

“Yes, it’s amazing to think that the record set by Mégane R26.R just six years ago has been beaten by more than 23 seconds! It shows that progress has been made in all areas. Step by step, the limits are being regularly pushed back. Take engines, for example. You could say that the extra 10 hp of Mégane R.S. 275 Trophy-R isn’t a big deal. But that extra power allowed us to extend the torque range, and I was able to take most corners at a higher gear than three years ago. At the end, that improvement is measured in seconds.”