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La vie, avec passion

# RENAULT *SPORT* **PRESS KIT**



## New Renault MÉGANE R.S.

### **PURE PERFORMANCE: FOR PEOPLE WHO LOVE TO DRIVE**

First unveiled at the Frankfurt Motor Show in September 2017, New Renault MÉGANE R.S. has been eagerly awaited by sports driving enthusiasts. **Aiming to become – like its predecessors – a benchmark** in the C-segment hot hatch market, this third generation of MÉGANE R.S. is **packed full of Renault Sport expertise and passion.**

Driven by its powerful design and focused on performance, **New Renault MÉGANE R.S. makes no attempt to hide its motorsport pedigree**, offering outstanding driving pleasure on the road and on the track.

- **A chassis combining efficiency, agility, stability and comfort**, equipped with the 4CONTROL four-wheel steering system and four hydraulic bump stop shock absorbers;
- **A new generation 1.8-litre turbo engine**, delivering 280hp and 390Nm thanks to the development work jointly carried out by engineers from Renault Sport Cars and Renault Sport Racing;
- Customers can choose one of four versions, adapted to all uses, with **two types of transmission available** (manual or EDC gearbox) and **two types of chassis** (Sport or Cup);
- **State-of-the-art technological features**, such as R.S. Vision, MULTI-SENSE or the new version of R.S. Monitor.

"Since the first generation of Mégane R.S. was released in 2003, we have constantly provided greater performance and more technology, offering improved driving pleasure without sacrificing the car's versatility for everyday use... Launched in 2009, Mégane III R.S. has become a genuine icon. Replacing it was a real challenge for the entire team. We're proud to have managed to produce a car with improved cornering efficiency, largely due to the introduction of 4CONTROL. The system improves both agility on tight corners and stability on fast bends, on the road and on the track. Drawing on the brand's vast motorsport heritage, New Renault MÉGANE R.S. has been designed by people who are passionate about cars for people who love to drive. Its versatility also makes it perfectly suited to everyday use."

**Patrice Ratti, Managing Director, Renault Sport Cars**

"After having been involved in the development process during 2017, I'm very proud to be the ambassador for New Renault MÉGANE R.S. I had the opportunity to drive the car at various racetracks – Monaco, Montlhéry and Spa-Francorchamps – and I was impressed by the efficiency of the latest onboard technologies. The 4CONTROL system is a dream come true for every driver looking for efficiency, since it improves both the agility and the stability of the car. It's a shame that four-wheel steering systems are banned in Formula 1!"

**Nico Hülkenberg, Renault Sport Formula One Team driver and Renault Sport Cars ambassador**



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# 01

## A CHASSIS COMBINING PERFORMANCE, AGILITY AND STABILITY

### 4CONTROL technology: exclusive to the segment

Having raised the bar on handling with Mégane III R.S., the chassis and suspension system engineers have pushed the limits even further by introducing 4CONTROL technology on New MÉGANE R.S.

Provided as standard on the Sport and Cup chassis, **this four-wheel steering system is a world first in the compact sports car segment.**

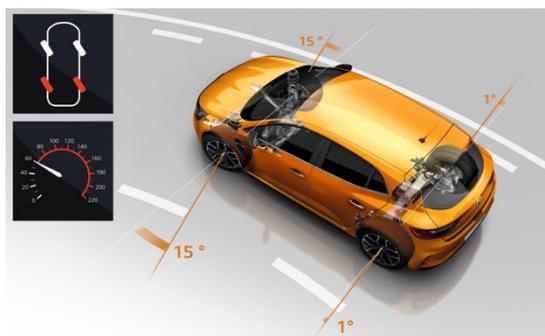
Renault Sport's chassis and suspension system experts have extensively revised the settings of the 4CONTROL system in order to adapt it to a high-performance sports car. This has created **an even more efficient driving experience**, giving drivers the feeling that the car is literally glued to the road.

The 4CONTROL system delivers **outstanding agility through tight turns and impressive cornering stability at higher speeds:**

- **At low speeds, the rear wheels turn in the opposite direction** to the front wheels, up to a maximum angle of 2.7 degrees. The 4CONTROL system really comes into its own on twisty, winding roads, **the 20% more direct steering delivering incisive handling.** The settings chosen deliver better entry on corners and a **"playful" side that is unprecedented** on a front-wheel drive car.
- **At high speeds, the front and rear wheels turn in the same direction**, limited to a one-degree angle for the rear wheels. With the rear wheels perfectly aligned, the driver enjoys **increased stability**, and a relaxed yet sporty driving experience.
- The switchover point is set at 60kph. This is increased to 100kph in Race mode. As this mode is intended to be used when driving on racetracks, the higher cornering speeds encountered explain this specific setting. The 4CONTROL system then helps drivers in **positioning the car on the right line through corners, enabling them to get back on the accelerator** as soon as possible.



**4CONTROL in less than 60kph  
(less than 100kph on RACE mode)**



**4CONTROL in more than 60kph  
(more than 100kph on RACE mode)**

### Strong core components, featured in all the generations

Included since the first generation of Mégane R.S. that appeared in 2004, the **independent steering-axis front suspension** epitomises Renault Sport's expertise in chassis and suspension systems. Initially designed for use in motorsport, independent steering-axis front suspension has been **adapted to powerful front-wheel drive cars**, especially when they are also fitted with a limited slip differential.

The front axle of New MÉGANE R.S. has been entirely redesigned in order to adapt the negative offset geometry to the width of the 19-inch wheels and increase rigidity.

New Renault MÉGANE R.S. is **available with two chassis: Sport and Cup.** This option, which allows customers to choose between **two types of handling**, stands out thanks to the specific suspensions settings (springs, shock absorbers, stops and anti-roll bar stiffness).

Designed to be at its most efficient on the road, New MÉGANE R.S.'s **Sport chassis** provides new versatility on all types of surface, including the poorest quality and most uneven roads. It comes with new shock absorbers and an electronically-controlled torque distribution system. By acting independently on the drive-wheel brakes, this technology **limits understeer and improves traction** when exiting corners.

Suited to intense sports-style use and especially to driving on racetracks, the **Cup chassis** offers a 10% stiffer damper system and **a new Torsen® mechanical, limited slip differential**. With modified settings compared with the previous generation, this new diff **improves handling in all phases**:

- During deceleration, the lower transfer rate (25%, compared with 30% on Mégane III R.S.) means that the vehicle achieves a more precise entry to corners;
- During acceleration, the higher transfer rate (45%, compared with 38% on Mégane III R.S.) increases traction and limits understeer, an inherent feature of front-wheel drive vehicles.

Previously acclaimed on Mégane III R.S., **the braking system has been improved**, offering drivers greater power, endurance and therefore confidence behind the wheel. The diameter of the front brake discs has been increased to 355mm (+15mm compared with the previous generation). Available as an option on the Cup chassis, **bi-material aluminium/cast iron discs** help reduce the weight per wheel by 1.8kg, whilst improving cooling during intensive use. The brake pedal setting focuses on the **accuracy of the pressure** applied, enabling drivers to remain in complete control, especially on the racetrack.

## Four hydraulic compression stops

The second brand new feature on the chassis of New MÉGANE R.S. is hidden in its suspension. Once again, **Renault Sport has raised the bar by fitting the hydraulic compression stops to all four shock absorbers**.

This rallying-inspired technology involves integrating a "shock absorber within the shock absorber". As the end of travel is approached, a secondary piston dampens the movement of the wheel before the bump stop. By dissipating the energy without transferring it to the wheel – as a traditional bump stop would – the compression hydraulic stops **help avoid any rebound and pendulum effects**, enabling optimum control of tyre-ground contact.

Whilst providing **increased comfort** when negotiating everyday obstacles (speed bumps, pot holes, etc.), the hydraulic stops also **filter out high-speed disruptions**:

- On the Sport chassis, sporty driving is made easier, with best-in-class efficiency;
- On the Cup chassis, greater sports performance is provided, with fewer trajectory variations and disruptions for the driver.



## MÉGANE R.S.: FIFTEEN YEARS ON!

Expanding Renault's sports car range, Mégane II R.S. was unveiled at the **2003** Frankfurt Motor Show. It hit the roads and showrooms the following year, boasting a powerful 225hp engine and already featuring independent steering-axis front suspension.

A Trophy version, equipped with a more radical chassis, was released in **2005**. Two years later, the F1 Team R26 – which paid tribute to Renault's World Championship titles – introduced limited slip differential.

The Mégane II R.S. adventure concluded in style in **2008** with the limited edition R26.R. A staggering 123kg lighter, it broke the lap record for a production car with a time of 8:17 on the Nürburgring's Nordschleife.

The third generation of MÉGANE picked up the baton in **2009**, with a 250hp engine and an even more distinctive, muscular look with the introduction of the F1-style blade on the front bumper.

Until **2016**, the career of Mégane III R.S. evolved through the release of limited editions and stylistic changes. In **2011**, the Trophy version, with its new 265hp engine, impressed with a new lap record at the Nürburgring (8:07.97). Times improved further with the 275 Trophy and the Trophy-R (**2014**). Driving this last version, Laurent Hurgon dipped under the eight-minute mark on the Nordschleife, **setting a third record with a time of 7:54.36**.

More than 53,000 cars from the first two generations of MÉGANE R.S. were sold in Europe, as well as in Japan, Australia, South Africa and beyond. Unveiled for the first time at the **2017** Monaco Grand Prix, New Renault MÉGANE R.S. picks up where they left off.



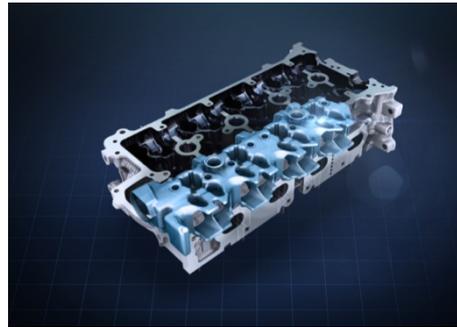
# 02

## NEW GENERATION ENGINES AND GEARBOXES

### A brand new 1.8-litre turbo engine derived from Alliance synergies

New Renault MÉGANE R.S. comes with a **new version of the 1.8-litre direct injection turbo engine**, derived from synergies in the Renault-Nissan Alliance. This version develops a power output of 280hp (205 kW) at 6,000rpm and a peak torque of 390Nm available from 2,400 to 4,800rpm. A key factor in driving pleasure and comfort, the car boasts **one of the best torque ratings in the category**.

In order to achieve the required performances, Renault Sport's engine specialists designed a completely new cylinder head, with a reinforced structure and more efficient cooling that dissipates heat right next to the combustion chamber. The design was entrusted to a task force made up of **the best specialists from Renault Sport Cars, Renault Sport Racing and the Renault Technocentre**<sup>1</sup>. By using the calculation and simulation facilities at the Viry-Châtillon site, development time was slashed to just six months.



Work also focused on the Twin Scroll turbocharger, already used on Mégane III R.S. This technology helps to **improve torque at low revs**.

To increase the supply of cool air to the engine, the air intake was redesigned with the addition of a second air inlet and a new, larger filter element.

Still with improved performance in mind, New MÉGANE R.S.'s engine has been given surface treatments taken from the world of racing and supercars, such as DLC (Diamond Like Carbon) for the valve lifters and Mirror Bore Coating for the cylinder sleeves.

This modern engine, equipped with a chain-driven timing system, also boasts **reduced CO2 emissions and fuel consumption** (-11% and -8% respectively compared with Mégane III R.S.).



<sup>1</sup> Renault's Engineering Centre

## A "TROPHY" VERSION BY THE END OF 2018

By the end of the year, Renault Sport will be releasing a "Trophy" version, with power output upped to 300hp and a peak torque of 400Nm. The Cup chassis, 19-inch wheel rims and the bi-material brake discs will be standard on this version.

### Manual or EDC gearbox: spoilt for choice

Widely acclaimed by owners of Mégane III R.S., the **six-speed manual transmission** is maintained on New MÉGANE R.S.

An optional **six-speed EDC dual-clutch gearbox** is also available now. In order to provide complete reliability, this gearbox – which is already in use on several models in the Renault range – has been strengthened to withstand the torque and revs of a sports car engine. Based on the required take-off acceleration, in-gear acceleration and maximum speed, the Renault Sport engineers defined **new gear ratios and specific shift patterns**, associated with the MULTI-SENSE modes so as to adapt to all driving styles.

Like racing cars, the EDC gearbox comes with **steering wheel-mounted gearshift paddles**. The gearshift times depend on which MULTI-SENSE mode is selected:

- **Comfort and Normal:** smooth gear changes, without any jerking;
- **Sport:** quicker gear changes with amplified engine noise;
- **Race:** efficiency with no compromise on comfort, with even quicker gear changes.

In Sport and Race modes, the EDC gearbox also has the following functions:

- **Multi Change Down:** under braking in manual mode, this feature lets you drop several gears simultaneously by pressing and holding down the left-hand paddle. The best gear is then selected in order to exit the corner as efficiently as possible.
- **Launch Control:** the clutch and turbo are pre-loaded, enabling standing starts to be made just as quickly as in a racing car. In Sport mode, traction control provides the driver with additional support in finding the best possible grip in slippery conditions.

# 03

## WHEN DESIGN ALSO MEANS PERFORMANCE...



### Wider tracks and features taken from the world of motorsport

With expressive and sporty styling, New MÉGANE R.S. has been **designed to deliver performance**, right down to the very last detail. The **specific body sides** mean that the wings have been widened by 60mm at the front and 45mm at the back (compared with Mégane GT). With the ride height lowered by 5 mm compared with Mégane GT and new 18- or 19-inch wheels, these new proportions make the car **naturally more aggressive**.

This powerful design is boosted by **a number of features taken from the world of motorsport**, which immediately place New MÉGANE R.S. in the high-performance category:

- A wide air intake in the front bumper that incorporates the **F1-style front blade**, a hallmark of Renault Sport styling that reflects the brand's involvement in Formula 1. The blade's Gun Metal Grey satin-finish colour contrasts with the brilliant shine of the bodywork;
- A 3D honeycomb-pattern grill mesh reinterpreted by Renault Sport;
- Sculpted, sensual body sides inherited from the design of Renault Mégane are accentuated by the **wider front and rear tracks**;
- Wing-mounted air **extractors**, which optimise air flow through the wheel arches;
- A side sill establishes a link between the front and the rear, the black blade of which evokes the undertray of a Formula 1 car;
- A redesigned, narrower **rear spoiler** to improve aerodynamic performance. Whilst emphasising the width of the car, the vertical vents contribute to aerodynamic efficiency by providing improved lateral air flow;
- A rear bumper with a built-in diffuser and the iconic central exhaust that has come to epitomise Mégane R.S., enhanced by a decorative trim;
- Improved efficiency of the **diffuser** compared with the previous generation. Whilst boosting the sporty feel of the design, this aerodynamic component helps to increase downforce;
- The **Brembo® brake callipers**, painted red on the Cup chassis so that they are instantly recognisable to enthusiasts.



## Tonic Orange: a dazzling, dynamic colour!

New MÉGANE R.S. also stands out with an **emblematic colour**: Tonic Orange, which supplements the palette of Renault Sport colours. Like Sirius Yellow, this new colour has been specifically developed for a **vibrant finish and unique reflective effects**, highlighting the profile of the car.

The cabin's resolutely sporty design is apparent everywhere you look:

- **Sports front seats** with built-in head rests, boosting the cockpit look of the interior;
- Two choices of upholstery (Charcoal weaved fabric or Alcantara<sup>®2)</sup>;
- Red top-stitching in a charcoal grey trim<sup>3</sup>, lending the interior a decidedly sporty feel;
- **Aluminium pedals** and specially-designed gearshift lever.

Specific work was done on the shape and materials of the seats to find **the best compromise** between the comfort needed for everyday use and the support required when driving on a racetrack.

## THE MANUFACTURING PERFORMANCE OF THE PALENCIA PLANT

Located 235km to the north west of Madrid, Renault's Palencia plant has built over four million Mégane cars since 1995. Thanks to the investments made recently in the press shop, body shop and paint department, as well as on the assembly line, the plant has met the challenge of producing New MÉGANE R.S. The front wings and the widened body sides have now been integrated into the bodywork, without the need for inserted or fixed parts, thus improving perceived quality.

# 04

<sup>2</sup> Varies according to country.

<sup>3</sup> Except on variants with sun roof.

# HARNESSING TECHNOLOGY TO BOOST PERFORMANCE

## R.S. Monitor: simpler and more powerful

Featuring a completely revised, more user-friendly layout and offering **extended functionalities**, the telemetry and data acquisition system R.S. Monitor provides New MÉGANE R.S. drivers with **a new experience**. There are two options for the system:

- Available when ordering the vehicle, **R.S. Monitor gathers and summarises information from forty or so sensors** spread around the car. It is therefore possible to display a wide range of vehicle settings in real time on the R-Link 2 touchscreen tablet: acceleration, braking, steering wheel angle, operation of the 4CONTROL system, temperatures and pressures, etc.
- Unprecedented in the segment, **R.S. Monitor Expert lets you film your driving sessions** and then overlay telemetry data, in order to obtain superb augmented reality videos. These videos enhance the New MÉGANE R.S. driver experience and can be instantly shared on social media using applications available for iOS and Android smartphones.

And if you want to go even further with R.S. Monitor Expert, the recorded data may be exported to the R.S. Replay website. You can then play back your driving sessions, analyse your laps down to the very last detail and compare them with other users from the Renault Sport community.

## R.S. Vision: high-performance lighting by Renault Sport

Introduced on New Clio R.S., **the multi-reflector LED lighting system** R.S. Vision comes as standard on New MÉGANE R.S. These chequered flag design lights are integrated in the front bumper, either side of the F1-style blade.

Unique in this market segment, R.S. Vision meets the need for powerful, efficient lighting, in line with the other features offered by New MÉGANE R.S.

Equipped with nine LEDs per block, this system combines **four high-performance lighting functions**: side lights, cornering lights, fog lights and long-range high beam lights.

With a range of 460 metres<sup>4</sup> (+17% compared with Mégane III R.S.), the high beam lights perfectly complement the Full-LED technology headlamps. For the first time, the C-Shape lighting signature incorporates the indicator lights.



<sup>4</sup> Measurement at 1 lux, the value representing the limit of light perception by a human eye.

## MULTI-SENSE: customise your sports car experience

Controlling engine response, the mapping of the accelerator pedal, shift patterns<sup>5</sup> and the stiffness of the steering, the MULTI-SENSE system lets drivers **customise their experience according** to the circumstances. Five positions are available:

- **Comfort:** specific engine response settings and gearbox shift patterns<sup>5</sup> that reduce fuel consumption;
- **Normal:** a good balance between comfort, acoustics and safety, with an ideal ESP activation threshold for everyday use;
- **Sport:** a sportier disposition, this mode combines more lively response with pleasingly accentuated engine noise, stiffer steering and a delayed ESP activation threshold;
- **Race:** for racetrack driving, the ESP is completely disabled and the settings of the 4CONTROL system deliver even more agile handling;
- **Perso:** this mode allows each driver to customise the settings of the various technologies and driver aids (ADAS) on the vehicle.

The various modes may be accessed via the R-Link 2 touchscreen tablet. The R.S. Drive button provides a shortcut to the Sport (short press) and Race (press and hold) modes.

## Harnessing technology to boost versatility

Whilst offering outstanding performances, New Renault MÉGANE R.S. is also an incredibly **versatile sports car, perfectly suited to everyday use.**

For the comfort and safety of the driver and the passengers, it comes equipped with all of the **advanced technologies** featured on Renault Mégane:

- Retractable colour **heads-up display**, featuring information about speed, navigation and driver aids;
- **A dozen or so driver aids** (ADAS), including the likes of adaptive cruise control (ACC), active emergency braking system (AEBS), safe distance warning (DW), overspeed alert with traffic sign recognition (OSP with TSR), blind spot warning (BSW), rear-view camera and hands-free parking (Easy Park Assist).
- An R-Link 2 touchscreen tablet – with horizontal 7-inch or vertical 8.7-inch screen – can be used to manage all of the vehicle's features: activate ADAS, manage the MULTI-SENSE modes, R.S. Monitor, etc.
- **An audio system developed in conjunction with engineers from Bose®** – featuring a central loudspeaker at the front, eight other speakers spread around the cabin and a subwoofer integrated in the luggage compartment – provides precise, clear and balanced sound.

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<sup>5</sup> On the EDC gearbox.