

Story

MAY 22, 2017

THE LEGENDARY MÉGANE R.S.

Reflections upon two generations of a standard-setting compact sports car



SET FOR LAUNCH IN THE SECOND HALF OF 2017, THE MÉGANE R.S. – RENAULT’S COMPACT SPORTS CAR – IS POISED FOR A SPECTACULAR COMEBACK.

Following a video teaser, acknowledging Renault Sport’s one million ‘likes’ on Facebook, the car made a discreet (and camouflaged) appearance at the Monaco Grand Prix, with Renault Sport Formula One Team star Nico Hülkenberg at the wheel.

In 2017, Renault Sport celebrates its 40th anniversary yet its mission remains unchanged: to create a clear link between motorsport, the brand’s commitment to Formula 1 and its standard production cars: “From the racetrack to the road.”

“The Mégane R.S. embodies the passion of every man and woman working for Renault Sport. It is the ultimate expression of the savoir-faire we have accumulated through our countless successes in motorsport. Thanks to its extreme cornering efficiency, the Mégane R.S. is extraordinarily satisfying to drive at even the most challenging venues, such as the Nürburgring’s Nordschleife in Germany. With its widened bodywork and aerodynamic elements derived from F1, it is also looks the part!”

Patrice Ratti, Managing Director, Renault Sport Cars

In two generations, and almost 16 variants, the Mégane R.S. has come to symbolise this philosophy. Thanks to a number of motorsport-derived

technologies, the Mégane R.S. has become a benchmark in the world of high-performance road cars.

2004-2009: THE BIRTH OF A FUTURE GREAT

A fresh initiative from Renault Sport

Renault's sporting traditions stretch back way farther than the original Mégane R.S. It was in the 1950s, under the influence of Amédée Gordini, that the company began to offer mass-produced sporting vehicles which went on to enjoy considerable success. They included some of the most iconic cars of all time, not least the R8 Gordini of 1964.

In the saloon segment, the Mégane R.S. became the latest model in a distinguished line that began with the R12 Gordini, which heralded the switch to front-wheel drive during the 1970s. The R11 Turbo created waves during the subsequent decade before ceding its crown to the Renault 19 16S in the 1990s.

The Mégane 2 R.S. was Renault's response to the need to expand its sporting range.

Originally unveiled at the 2003 Frankfurt Motor Show, the Mégane R.S. hit the road for the first time the following year.

Two bodywork options were available for the first Mégane RS: coupé or hatchback, with three or five doors, like the Mégane 2 itself.

Although the R.S. might have looked like a standard Mégane 2 from a distance, a number of key features pointed to its sporting prowess, like its twin exhaust tail pipes, an R.S. cue as previously seen on the Clio V6. Its assertive front-end design included a bespoke aerodynamic bib, a broad air intake to facilitate engine cooling and wide-set foglamps. The Mégane R.S. also had a distinctive rear spoiler and its sporting credentials were underlined by bespoke 18-inch aluminium wheels and Renault Sport badging.

From launch, the car benefitted from an exclusive palette of paint options including Blood Orange, Technique Grey and Arctic Blue. Indeed, throughout the Mégane R.S.'s career, an exclusive new body colour has been introduced to mark the arrival of each new variant. The list extended from single-tone Mahaka Grey for on the first Trophy¹ version in 2005, to the two-tone option on the 2015 Trophy-R. The list also obviously included Renault Sport's signature colour, Sirius Yellow.

An iconic engine: the F4RT

The success of the first-generation Mégane was underpinned by its engine and chassis. The technical team opted for proven technology to power the newcomer, choosing the F4RT version of the well-known F-type block. Renault had previously used this four-cylinder turbo in the Avantime and Renault Laguna, as well as under the bonnet of the Clio RS. Renault Sport's experts tuned this 165-horsepower powerplant to deliver 225hp in the Mégane R.S. Christened F4RT RS, it also complied with Euro4 emissions standards.

With 300Nm of torque available from just 2,000rpm, this engine had all the necessary ingredients to appeal to those who were looking for sensational performance. In parallel, the turbo featured a specially designed turbine and compressor, while the crankshaft and pistons were modified to match the altered compression ratio.

The R.S. accelerated from 0-100kph in 6.5s and covered the standing kilometre in only 26.7s.

Independent Steering Axis Front Suspension, a bold innovation

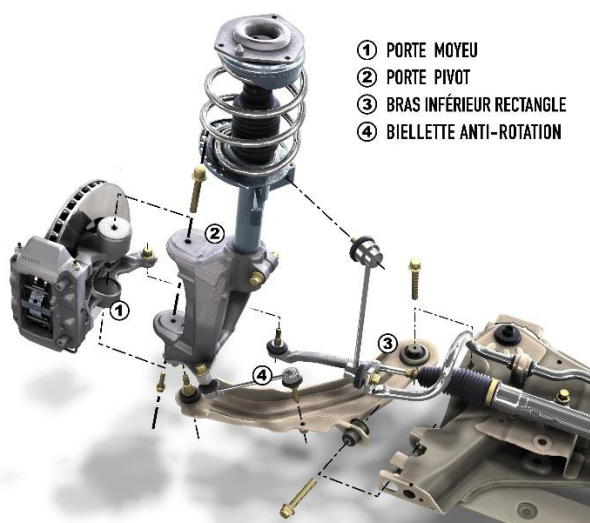
Finally, if this Mégane stood out particularly it was due to a chassis that featured a remarkable technological breakthrough: independent steering axis front suspension.

Previously deployed on the racing version of the R21 Turbo, this technology led to the elimination – or at very least the containment – of the adverse reactions that can be caused by high levels of power and torque. With this system, the front suspension's pivot axis is decoupled and the wheel's rotation on its correct axis is assured by a link between the hub and aluminium pivot carrier.

¹ The name given to the sportier versions of the Mégane R.S.

The offset is thus reduced to 32mm (compared with 60mm in the case of a McPherson strut-type suspension, like that of the Mégane 2).

The pivot carrier is attached to a rectangular lower arm while accurate wheel guidance is optimised by a connecting rod between the two parts.



- 1) Hub carrier
- 2) Pivot carrier
- 3) Rectangular lower arm
- 4) Anti-rotational connecting rod

With 5,200 units sold since 2004, this first-generation Mégane R.S. sowed the seeds for the model's long-term success – and that success has been boosted by the launch of each subsequent new model.

2005-2009: FROM THE RACETRACK TO THE ROAD, THE MEGANE R.S. ROCKS THE COMPACT SPORTS CAR ESTABLISHMENT

Over the course of its production run at Renault's Dieppe factory from 2004 to 2009, the Mégane R.S. spawned no fewer than four different versions – two facelifts and a dCi variant – to meet Renault Sport's stated ambition to carry over the benefits of motorsport-honed technologies across to its road-going vehicles.

It was in this spirit that in 2005, just nine months after the introduction of the original Mégane R.S., a 'Trophy' edition appeared, fitted with the even more radical Sport² chassis, stiffer springs at both the front (+25%), and rear (+77%), a 1mm-smaller anti-roll bar, damper stops and the option of deactivating the Electronic Stability Programme (ESP).

With this new chassis, Renault Sport split its Mégane R.S. offering into two distinct versions – a theme that would continue through the following generations (with the Sport and Cup chassis). In its first evolution, the Mégane R.S. did not change its good manufacturing practice (GMP). Its new chassis, the fitment of lighter rims and the vehicle's enhanced traction were sufficient to optimise its performance.

² Which would subsequently become the Cup chassis (with the original chassis taking over the 'Sport' moniker)



The 2005 Mégane Trophy – the first Mégane to feature Renault's 'Sport' chassis

An even more responsive chassis, complete with limited-slip differential

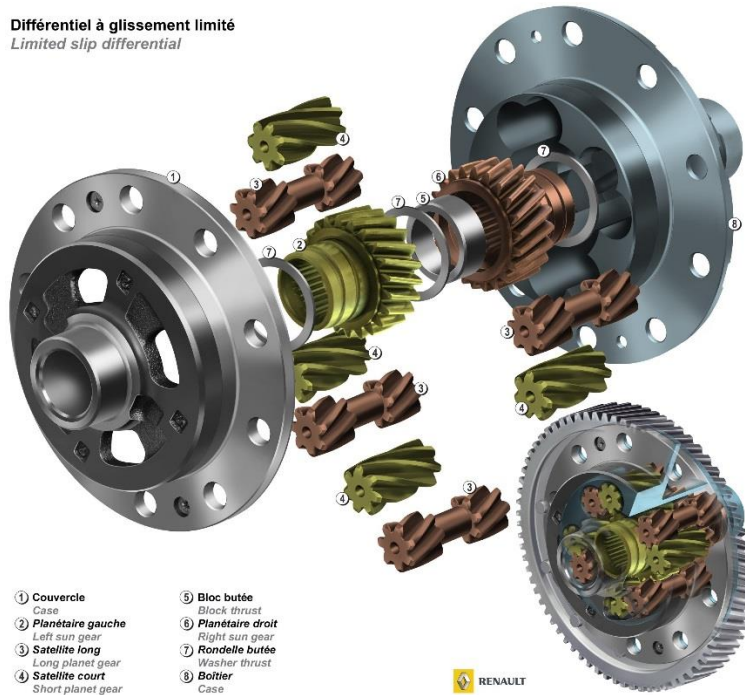
In 2006 and 2007, the Mégane F1 Team and F1 Team R26 versions paid tribute to Renault's Formula 1 World Championship success, with the former heralding the introduction of motorsport-inspired Recaro bucket seats.

The latter – awarded *Echappement* magazine's 'Sports Car of the Year' accolade in France in 2007 – further caught the imagination by offering, for the very first time, a technology employed widely throughout the motorsport world: the limited-slip differential³.

Thanks to this technology, which transfers the engine's torque to the wheel with the most grip when wheelspin is detected, what was already a highly responsive chassis became even more on-point.

³ Only on the Cup chassis

Différentiel à glissement limité
Limited slip differential



- | | |
|---|---|
| ① Couvercle Case | ⑤ Bloc butée Block thrust |
| ② Planétaire gauche Left sun gear | ⑥ Planétaire droit Right sun gear |
| ③ Satellite long Long planet gear | ⑦ Rondelle butée Washer thrust |
| ④ Satellite court Short planet gear | ⑧ Bollier Case |

With an Electronic Stability Programme that could be completely disconnected, this version quickly established itself as the most engaging drive in the Mégane R.S. range. Moreover, the F4RT R.S. engine offered even more power than before, producing 230hp and 310Nm of torque.

From a design perspective, the F1 Team R26 was manufactured in Renault Sport's signature Sirius Yellow.

The most radical R.S. – the R26.R

The story of the first-generation Mégane R.S. culminated in Renault Sport's most radical offering to-date – the Mégane R26.R, which was officially unveiled at the 2008 London Motor Show.

Launched as a numbered limited-edition model, this version was designed with sheer performance in mind.

Its total weight of 1,232kg marked a saving of 123kg over the F1 Team R26, achieved by its aluminium frame, carbon fibre bonnet, polycarbonate windows and rear windscreen, and carbon fibre bucket seats complete with six-point harness belts.

Having shed its excess kilograms, it was capable of sprinting from 0-100kph in just six seconds and reaching 1,000m from a standing start in only 25.9 seconds.

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In a period of just five years, the Mégane R.S. succeeded in firmly establishing itself in the compact sports car segment and, by the time production of its first generation ceased, almost 22,500 vehicles had been manufactured at Renault's Dieppe plant.

Lapping up the awards

Over the course of its existence, the Mégane R.S. has picked up countless prestigious accolades. France's *Echappement* magazine recognised its qualities with no fewer than three 'Sports Car of the Year' awards (for the F1 Team R26 in 2007, the R26.R in 2008 and the Trophy-R in 2014). British publication *Evo* similarly sung the praises of the F1 Team R26 in 2008.

Together with the other models in the Renault Sport range, the Mégane R.S. picked up a coveted *Top Gear* award in 2009 in the 'Manufacturer of the Year' category.

It also clinched *What Car?*'s 'Best Hot Hatch' prize for three consecutive years from 2010 to 2012.

2009-2017: THE MEGANE 3 R.S. – A POTENT SPORTS CAR THROUGH-AND-THROUGH

In 2009, the next generation of the Mégane R.S. was unveiled with a sharp, dynamic coupé look, instilling it with a bolder identity – that of an everyday sports car that was also capable of delivering flawless performance on a racetrack.

The chief principles established by the Mégane 2 R.S. were duly retained, with a choice of two different chassis options (Sport and Cup), Recaro seats, Renault's independent steering axis front suspension and – on 'Cup' versions – a limited-slip differential.

Sportier and more dynamic

Bringing it more in line with the standard Mégane, production of the Mégane 3 R.S. was transferred from Dieppe to Renault's Palencia plant in Spain. The main production line was adapted to accommodate the R.S., with its pronounced haunches, wide air intake grille, F1-style aerodynamic front blade, central exhaust tail pipe and rear spoiler. From the very first glance, it exuded unmistakably sporty appeal, particularly in Renault's brand new Sport Yellow colour.

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The front suspension was considerably modified, with aluminium steering axis pivots, pivot-holders and lower arms, while a new engine subframe reduced unsprung mass.

A new electric power steering system was introduced, taking advantage of the evolutions brought to the Mégane 3 while tailoring it specifically to the R.S variant.

In terms of the brakes – already widely acclaimed in previous versions – Renault Sport continued its collaboration with Brembo to produce four-piston calipers and 340mm ventilated discs.

The two chassis options (Sport and Cup) were distinguishable by their different suspension calibration and spring stiffness, specific to each version. The Cup version benefitted in particular from an advanced limited-slip differential, in which the nominal ratio between the torque transferred to the wheel with the most grip and that with the least increased from 2.1 to 2.3.

The engine was similarly refreshed, with the addition of 20hp and 30Nm torque increasing the respective totals to 250hp and 340Nm.

The R.S. Monitor: learning to drive like a pro

Just as Renault's innovative independent steering axis front suspension layout was synonymous with the first-generation model, so the new Mégane R.S. was characterised by the introduction **of the R.S. Monitor**. Exclusive to Renault Sport, this technology uses sensors and accelerometers to record a variety of information about the manner in which the vehicle is being driven before displaying this data on the central screen. This information includes the stresses on different parts of the engine (turbo pressure, oil temperature) and general performance indicators such as the level of power and torque utilised, adding an extra dimension to the driving experience. All of the above data can subsequently be collated for computer analysis, racing driver style.

An international success story

This generation also marked the Mégane R.S.'s expansion on the international stage, as it spread the Renault Sport message beyond Europe and particularly in Australia, where some 2,360 cars were sold between the end of 2010 and the end of 2015. A year later still, the Mégane R.S. could be found in more than 40 countries, with international sales accounting for around two-thirds of volumes – half of which were sold outside of Europe. In the regions furthest from its home market like Japan, the Mégane R.S. maintained the link between Renault and Formula 1, while helping to enhance Renault Sport's positive global brand image.

A motorsport favourite

The Mégane R.S.'s story would not be complete without mentioning its motorsport prowess in the hands of private entrants on both the racetrack and rally stages.

In 2005, the Trophy V6 model appeared as part of the popular World Series by Renault package with the inauguration of the single-make Eurocup Mégane Trophy. Bearing all the distinctive hallmarks of the Mégane R.S., it nonetheless stood out for its rear-mounted V6 engine and tubular chassis. The launch of the Mégane 3 was the catalyst for a facelift, to bring the race version more in line with the road car's new coupé look.



On the rallying scene, the Mégane R.S. N4 made a name for itself on asphalt events. Launched in 2010, it followed in a long tradition of Renault models homologated for Group N competition. This version inherited all the qualities of its road-going sibling, while complying with the category's technical regulations. In 2011, the Mégane R.S. N4 won its class in the French Rally Championship.



2011-2016: SETTING THE STANDARD BY GOING THE EXTRA MILE

In keeping with the trend that has been maintained ever since the model's first generation, every new limited-edition version and evolution has been progressively sportier and more radical than the one before.

An increasingly muscular proposition

In 2011, a Trophy variant of the Mégane 3 R.S. appeared. Based on the Cup chassis, a more potent engine produced 265hp and 360Nm torque, which made it the fastest front-wheel-drive car on the market. While just 500 examples were initially slated for production, the Mégane 3 R.S. Trophy proved to be such a great success that 1,068 vehicles ultimately rolled off the assembly line.

The years that followed witnessed two significant evolutions. The first was aesthetic, with the launch of the Mégane Collection 2012 and Mégane Collection 2014. A restyled look resulted in a more expressive gaze, plus a higher-quality, more comfortable interior with a number of options aimed at enhancing the driving experience (Red Design Pack Design, Bose audio system), while the introduction of the 265hp powerplant injected an extra dash of energy. In 2012 and 2013, the RB7 and RB8 limited-editions – based on the Cup chassis – celebrated the successful partnership between Renault and Red Bull Racing with a distinctive Formula 1 look.

The most recent R.S. – designed to break records

The second evolution was far more technical, yielding a brace of models designed with outright performance in mind, like the R26 and R26.R before them – the 275 Trophy and the Trophy-R.

The former, as its name suggests, benefitted from an increase in engine output to 275hp and 349Nm torque while shedding a few kilos, standing out from the crowd with its Akrapovič titanium exhaust system. Offered as an option, Öhlins shock absorbers refined the car's handling and comfort for the ultimate driving experience.

The Trophy-R, meanwhile, came in for the same treatment as the R26.R, with a weight saving of as much as 101kg in comparison with a Cup chassis mounted on 19-inch wheels. Only 322 cars were produced in this limited-edition run, and with 77 percent of its sales coming from outside of France and 21 percent outside Europe (with 50 cars sold in Australia and 60 in Japan, for example), it underscored the outstanding success of the Mégane R.S. on the international stage.



The Nürburgring adventure!

No telling of the Mégane R.S. story would be complete, finally, without referencing its record-breaking achievements at the Nürburgring. In almost a decade-and-a-half of existence, it has established three new lap records around the legendary German circuit's North Loop – the fearsome Nordschleife – composed of no fewer than 154 corners and aptly nicknamed the 'Green Hell'.

In 2008, the R26.R covered the 20.832km distance in 8m17s, before the R.S. Trophy 265 obliterated that record with a time of 8m7.97s three years later.

In May 2014, Renault Sport driver Laurent Hurgon famously broke the eight-minute barrier by completing the lap in just 7m54.36s behind the wheel of the 275 Trophy-R. As the first front-wheel drive vehicle to lap beneath eight minutes at the Nürburgring, the Mégane R.S. set the bar high as the indisputable new benchmark in its class.

From 2015 to 2016, Renault Sport completed the production of the Mégane 3 R.S. by making the entire range available with the 275hp engine – a final gesture before launching a completely new generation. This model enjoyed a sneak preview at the Monaco Grand Prix ahead of its official unveiling during the second half of 2017, with one key objective – to continue the incredible success story of Renault's pace-setting compact sports car.

The Mégane R.S. story – landmark dates

2004: The first Mégane R.S. goes on sale

2005: Introduction of the Trophy version

2007: Launch of the F1 Team R26 variant and first availability of a limited-slip differential

2008: The Mégane R26-R breaks the Nürburgring Nordschleife lap record in a time of 8m17s

2010: Launch of the Mégane 3 R.S.

2015: Introduction of the Mégane R.S. 275 Trophy-R with a limited production run of just 322 cars

2017: The New Mégane R.S. officially unveiled at the Frankfurt Motor Show