

RENAULT SPORT

PRESS KIT

NEW RENAULT MÉGANE R.S. TROPHY-R: EXCLUSIVELY PERFORMANCE

New Renault MÉGANE R.S. TROPHY-R is the **most high performance production car Renault has ever put on the market**. It is rooted in Renault's immense history in motorsport, and perpetuates the **legend of the record-breaking Mégane R.S.**, once more bringing to the roads **the technologies and know-how Renault Sport has developed on the racetrack**. For this car, Renault Sport engineers have pushed their expertise further than ever before. The outcome was validated by a **new record on the Nürburgring**.

- The new MEGANE R.S. TROPHY-R has the same exceptionally efficient **1.8 L 300 bhp engine** as the Trophy version (167 bhp/l). So the Renault Sport wizards did not focus on power to enhance performance, they looked elsewhere in three main spheres of development.
- **Drastic reductions in mass**. The quest to reduce weight looked at every detail, from the absence of a rear seat to the adoption of (optional) carbon wheel rims, not forgetting the Akrapovič titanium exhaust line. Verdict on the scales: -130 kg lighter than the Mégane R.S. Trophy without options.
- **Completely redesigned suspension, for a more radical result**. Front axle with increased negative camber, lighter rear H axle, specific adjustable Öhlins shock-absorbers, Bridgestone Potenza S007 tyres exclusive to Renault Sport, and high performance braking with optional Brembo carbon-ceramic discs, etc.
- **Aerodynamics improved even further** for better support and better circulation of flows (specific underbody fairings and carbon diffuser) and additionally optimised thermal control (NACA air intake, brake scoops, etc.).
- This expert work has been validated by the stopwatch: a **new absolute record for a front-wheel drive production car** was achieved on 5th April 2019 by the New MÉGANE R.S. TROPHY-R on the 20.6 km of the Nordschleife at the **Nürburgring in 07:40.100**. It also clocked up a reference time of 07:45.389 on the official full lap of the circuit. This is an extreme performance bearing in mind the margin of progress is increasingly narrow at such a level.
- New Mégane R.S. Trophy-R, an exceptional car, will be on sale by the end of 2019 in the form of a limited series of 500 numbered vehicles.

Patrice RATTI, Renault Sport Cars General Manager:

“New Mégane R.S. Trophy-R completes the Mégane R.S. range with a more extreme version. It is very similar to a racing car, but is certified for the public highway. We know there are customers looking for this type of car, and not every driver should be put behind the wheel of such a car. For the engineers it's an opportunity to concentrate their know-how to produce the fastest car possible. The Nürburgring record is a demonstration of that performance. “

INTRODUCTION

Over the last 15 years, the Mégane-based Renault Sport versions have written some of the finest pages in the history of modern hot hatches. And for more than 10 years now, the **MÉGANE R.S.s in their more radical versions have successively beaten the lap record for the Nürburgring**, recognised around the world as a proving ground to evaluate a car's performance.

The latest generation of Mégane is no exception, with the **New MÉGANE R.S. TROPHY-R beating a new record**, developed like its predecessors to attain extreme levels of performance. Rather than simply focusing on power, the idea is to achieve improved performance by concentrating on **three pillars: weight, maximisation of aerodynamic efficiency and more radical suspension systems**. This "North face of performance" is a continuation of the noble tradition of Renault Sport models, concentrated on speed around bends rather than pure performance down a straight.

The new MEGANE R.S. TROPHY-R was **born from competition**. The involvement in motorsport contributes to development of Renault Sport's production cars. No more compromises now: it has become completely **radical**. A commitment to pure efficiency exclusively aiming to optimise performance for demanding drivers.

The new MEGANE R.S. TROPHY-R is a hot hatch ready for the racetrack. With greater driveability, speed around bends and braking endurance, it is capable of bringing **immense pleasure** to those who know how to extract its essence. **A car for drivers: ultimate, honed**, its level of performance enables it to compete with models that have more than two drive wheels and more than 300 bhp under the bonnet.

This exceptional car will be made available as **a limited series of 500 numbered vehicles**.

Loïc FEUVRAY, Trophy-R Renault Sport Cars program manager: *"New Mégane R.S. Trophy-R will interest expert customers looking for pure performance with no compromises - ready to treat themselves to something exceptional. Only 500 cars will be made, 30 of which will be fitted with the optional Carbon-Ceramic pack offering features that are ground-breaking in this segment. The high level of performance is also in the management of this project. From the beginning the product specifications are centred on clear objectives, a minimal "racing" team, agile management where decisions are taken immediately to eliminate any barriers preventing technical deployment. In the end the objectives are reached, the schedule is respected, and the result is an exceptional and profitable product."*

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THE THREE PERFORMANCE PILLARS

A. WEIGHT REDUCTION IS AN OBSESSION

The new MEGANE R.S TROPHY-R benefits from truly remarkable weight reduction: 130 kilos with the lightest equipment compared to the Trophy version without options. Accordingly it is certified with a minimum mass of 1,306 kg, representing a power/mass ratio of 4.35 kg/bhp.

Thierry RÉVEILLÉ, technical synthesis engineer Mégane R.S. Trophy-R Renault Sport Cars:
“Weight reduction plays a major role in increasing the performance of New MÉGANE R.S. TROPHY-R. In addition to offering a better mass/power ratio, the virtuous circle of weight reduction delivers better agility and performance. Light is right! “

Exterior

The shape follows the function and expresses performance in a natural manner.

- **Carbon composite bonnet:** weight halved (just 8 kg). Carbon is used for the NACA air intake and the bonnet lining, while the remainder is fibreglass. The bonnet design incorporates a functional feature with louvres and a NACA air intake, naturally reinforcing the vehicle's sporty design.
- **Entirely carbon rear diffuser.**
- **Wheels:** the design of the Fuji Light 19" alloy wheel generates a weight saving of 2 kg/wheel. The optional carbon wheel developed by Carbon Revolution, brings an additional weight saving of 2 kg/wheel. A ground-breaking feature in the world of generalist car manufacturers.
- **Akrapovič titanium exhaust line** providing a weight saving of more than 6 kg, as well as a more metallic sound, (see box).
- **Specific lighter rear axle** for a 38 kg weight saving. The necessary to reduce weight to improve pure performance led to the decision to adopt a non directional rear axle for New MÉGANE R.S. TROPHY-R. This is a car aimed at experienced drivers. The demands made of the driver result in top notch performance levels, as proven by the record achieved at the Nürburgring !
- **The air intakes replacing the R.S. Vision Headlights**, as an option, deliver a 2 kg weight saving, and what's more this is for an overhanging mass.
- **A high performance DESS lead battery** (*Dual Energy Storage System*) combined with the super capacity. A **lithium DESS battery** is available from the online store as an accessory, providing an additional 4.5 weight saving in the R.S. Performance line. www.R.S..com).

AKRAPOVIČ EXHAUST

For several years Renault Sport has been working with the renowned specialist in sports exhausts, Akrapovič. This is why the Slovenian brand's exhaust line was fitted to the Clio R.S. 16, the Clio IV R.S. Trophy, the Mégane R.S. 275 Trophy and Trophy-R. Today Akrapovič supplies the titanium exhaust for the New MÉGANE R.S. TROPHY-R. The digital simulation work consisted in initially defining an exhaust line certified for the road and racetrack, blending into the vehicle architecture and compatible with the carbon diffuser. Renault Sport expertise and Akrapovič technological know-how combined to produce the first prototypes, which were finalised and tested at the same time on the vehicle and the test bench. The end result is a lighter exhaust line with a more metallic sound.

Interior

Around the driver's seat, weight reduction goes hand in hand with an atmosphere and sensations very similar to those of a racing car.

- **Sabelt composite monocoque racing seats** coated with Alcantara® (weight saving of approximately 7 kg per seat). Both seats can be positioned at 3 height levels. The new MEGANE

R.S TROPHY-R is configured to accommodate a Sabelt 6 point harness (available as an accessory).

- **Holding subframe lighter than a rear seat** (-25.3 kg), to accommodate the optional kit of 4 carbon wheels with their covers and straps. This area is directly accessible via the rear doors which remain operational. The final touch in the rear area is a lighter false floor marked with the letter R. This is the ideal configuration to set off behind the wheel for a *track days* weekend.
- **Thin glazing, sealed rear door windows and rear window with no wiper.**
- **7" multimedia screen:** superfluous weight is eradicated even in the tiniest details (-250 g compared to the 8,7" screen). The reversing camera is maintained however, to avoid any risk of damaging the carbon diffuser when manoeuvring.

SABELT SEATS

The new MEGANE R.S TROPHY-R is fitted with Sabelt monocoque composite seats fitted on a specific light podium. They are covered with Alcantara® for the grip and racing atmosphere. This provides lateral support for racing, while ensuring a comfortable experience on the road too. The Sabelt marking uses the interior colours of the New MEGANE R.S. TROPHY-R for seamless integration.

B. SUSPENSION SYSTEM: SPEED ON BENDS AND PRECISION

At the same engine power, New MEGANE R.S. TROPHY-R ratchets up once more the efficiency of its road handling. The axle geometry has been revised to increase speed around bends and driveability exiting bends. With its many available adjustments, New MEGANE R.S. TROPHY-R is tantamount to a racing car, while remaining certified for the road.

Laurent HURGON, Renault Sport test driver and adjuster: *“This new version is a demanding car for expert drivers who love to fine tune, and are seeking performance above all else. Every driver can make adjustments to their vehicle, learning to master the car, adjusting the shock absorbers and attitude to fine-tune handling to meet their requirements for driving into, through and out of bends, etc. “*

- The new MEGANE R.S TROPHY-R benefits from a **specific chassis** with its own geometry, and a **Torsen® limited slip differential**. Just like a racing car, the **front axle** keeps its independent pivot and has a **negative camber increased by 1°** compared to that of the Mégane R.S. Trophy: -2.05° in total, a rare value for a production car. As a result the tyre surface area in contact with the road is greater on bends, to enable higher speeds driving through bends and better driveability exiting bends.
- The **lightened H rear axle** is specifically for this version.
- The new MEGANE R.S TROPHY-R standard version is equipped with **Bridgestone Potenza S007** tyres (also available as an option on Mégane R.S. Trophy). Developed specifically for Renault Sport (for the first time they sport an exclusive R.S. Marking), with the TROPHY-R in their sights, they offer very high level grip and response. *[See box]*
- **Braking** is at the level of performance to be expected for the New MEGANE R.S.s TROPHY-R. Braking efficiency is naturally improved by the weight reduction measures on the New MEGANE R.S. TROPHY-R. In the standard version it has the grooved dual material 355 mm front brake discs from Mégane R.S. Trophy, combined with new **Brembo 4 piston 42 mm callipers** (40 mm on the Trophy).
As an ultra-exclusive option, it can be fitted with **390 mm carbon-ceramic front brakes**, taking up all the available space in a 19” wheel. The first time ever for a generalist manufacturer! **Brembo Gold 4** piston callipers (top pistons 44 mm, bottom pistons 40 mm) put the finishing touch to this ultra high performance braking system. To tune it a specific ABS/ESP calibration was necessary, to ensure deceleration requires less effort and is more constant for extreme driving. This gives New MEGANE R.S. TROPHY-R ultimate braking performance and unbeatable endurance of severe demands, while the disc’s carbon-ceramic material considerably lengthens its operating life. *[See box]*
- The **specific shock absorbers from Öhlins** make a major contribution to the dynamic efficiency of the New MEGANE R.S. TROPHY-R. At the front, they can be adjusted for **body height and compression/expansion**. At the rear, they can be adjusted for **compression/expansion with a possible body height adjustment too** (up to -16 mm) thanks to the adjustable stopblock combined with a short spring, available as R.S.s Performance Accessories for customers who want to further personalise their settings for racetrack driving. The chassis comprises specific adjustments, with augmented rigidity springs and a reduced anti-roll value compared to Mégane R.S. Trophy. *[See box]*
- The different selectable Multi-Sense driving methods remain available.

BRIDGESTONE TYRES

Bridgestone is the exclusive supplier of tyres for New MEGANE R.S. TROPHY-R with its high performance Potenza S007 casings, developed especially to derive maximum advantage from the capacities of the Mégane R.S. Trophy and TROPHY-R.. In particular the Bridgestone Potenza S007 delivers remarkable response in terms of steering and optimum grip for sporty driving styles. With its specific R.S. Marking on the wall, this is a unique product. It will also be available as part of customer service with all the characteristics of the OEM part. A high performance tyre that can be used every day, capable of enabling a record-breaking run on the Nordschleife.

ÖHLINS SHOCK ABSORBERS

The Swedish suspension specialist, present at the highest level of competition, was already on the technical menu of the Mégane R.S. 275 Trophy-R (and as an option on Trophy). On New Mégane R.S. Trophy-R, Öhlins is back with a shock absorber with a special technical feature, reverse rod architecture. Thanks to double channel adjustment the customer can modify the tuning of their car exactly as they wish.

BREMBO BRAKES

Renault Sport once again called on the services of Brembo, the worldwide leader in braking systems whether for the road or the racetrack. To develop the carbon-ceramic braking system, dimensioning, digital simulations and validations by physical testing were carried out jointly by the Renault Sport and Brembo teams. One specific feature of Trophy-R: the Brembo Gold callipers marked with the Renault Sport symbol.

C. AERODYNAMICS: MAXIMUM DOWNFORCE

For aerodynamics as for all other domains in this radical version, the technical efficiency of each component had to be validated. So design choices were made with the sole aim of optimising performance. This made it possible to obtain greater front and rear downforce, while limiting aerodynamic drag. Work was punctuated by iterations between CFD computations (*computed fluid dynamics*) and work in the wind tunnel.

François-Xavier DELAGE, Mégane R.S. Trophy-R Renault Sport Cars head engineer:

“Considerable work was conducted on aerodynamics, for the same purposes as weight reduction and suspension: to increase grip by improving the overall aerodynamics and front/rear aerodynamic balance, in particular due to the resulting weight reduction in the rear part of the car. While the specific underbodies smooth the airflow upstream, the diffuser with its enlarged section downstream generates double the downforce than on Mégane R.S. Trophy with very limited deterioration of drag (+ 1.5%). These specific technical elements to enhance performance enabled the designers to produce an expressive resolutely “racing” design.”

The new MEGANE R.S. TROPHY-R get a **new bonnet with its NACA intake** (*National Advisory Committee for Aeronautics*, predecessor of NASA, which developed air intakes with minimum disruption of flow and reduced drag). Combined with the extractor under the engine, this makes it possible to optimise cooling of the engine compartment during dynamic phases. When idle, the lateral **louvers** on the bonnet provide natural extraction in addition to the NACA intake.

A **dynamic air intake** on the left-hand side (instead of the R.S. Vision Headlights), as an option, limits the intake air temperature. An **intake air duct** available as an accessory extends this air intake into the engine filter unit. **Brake scoops** improve ventilation of the discs and therefore braking endurance in severe conditions.

The **bottom blade under the front bumper** has been redesigned to provide better aerodynamic balance between the front and rear, while the **fairings** under the front bumper and under the chassis smooth air flow to optimise supply to the rear diffuser. This entirely carbon **rear diffuser** is equipped with F1 type curved thin deviations, with an augmented effective surface area in the central section in particular. The air flow thereby maximised **increases the downforce** compared to the Mégane R.S. Trophy. To achieve this same objective, the Akrapovič titanium exhaust line has very unobtrusive bevelled cannulas in the central airstream.

ENGINE: THE 300 BHP OF THE MR18

In view of the extremely high specific power rating already achieved by the MR18 engine of the Mégane R.S. Trophy (pushed to 300 bhp, i.e. 167 bhp/l), the performance of the New MEGANE R.S.

TROPHY-R has been developed using other levers such as the increase in longitudinal and transverse performance.

As a reminder, this block is a 1.8 L direct injection turbo, resulting from the synergies of the Renault-Nissan Alliance. It develops 300 bhp (221 kW) at 6,000 rpm for a torque value of 400 Nm. It is equipped with a particle filter and meets the Euro 6d temp standards. Its turbo-compressor makes use of a technology originating directly from Formula 1, with rotation at 200,000 rpm and adoption of a ceramic ball bearing to reduce the turbo response time.

As proof of its performance, this was the block Renault Sport Racing chose to equip the latest generation of Formula Renault in the demanding Formula Renault Eurocup championship.

The 6-speed manual gearbox is lighter than the double clutch EDC gearbox and is the only one available on the New Mégane R.S. TROPHY-R.

Performance:

- Max speed: 262 kph
- Acceleration 0-100 kph: 5.4 s
- Acceleration 80-120 kph in 3rd gear: 2.9s
- Standing kilometre: 24.5 s

INDUSTRIALISATION: THE CHALLENGE OF AN EXCEPTION

"Industrialisation of Mégane R.S. Trophy-R took place within a very short timeframe. This veritable challenge was taken up by the Palencia Renault plant, which assembles the whole of the Mégane range. So the specific front axles with carbon-ceramic brakes are fitted on the same assembly line as Mégane!" - Thierry Réveillé, development engineer, New Mégane R.S. Trophy-R.

Renault Sport Cars made use of close collaboration with the plant, and also with the Renault TECH, located at the end of the process. A team of 15 people work in this workshop. They are capable of setting up a tailored industrial system to fit parts that cannot be assembled on the assembly line, such as the bonnet, diffuser and carbon wheels, in particular. These are tasks where the human hand brings utmost care and precision to create this exceptional object, the New MEGANE R.S. TROPHY-R. The team is capable of preparing 15 vehicles per day.

02

A LIMITED SERIES SIGNIFYING EXCLUSIVITY

A. 500 VEHICLES FOR THE MOST DEMANDING CUSTOMERS

Like its predecessors the Mégane R.S. R26.R and Mégane R.S. 275 Trophy-R, New MÉGANE R.S. TROPHY-R is a rare and exclusive car that uses the codes expressing the identity of the signature that became legendary in 2014. It speaks to **the most demanding type of Renault Sport customers**, those seeking the most sophisticated kind of sporty handling and **motivated above all by performance**.

Damienne DENIS, head of the Renault Sport Cars marketing department: *“With New MÉGANE R.S. TROPHY-R, we are targeting our most radical customers, for whom performance is the number one purchase criterion, well ahead of all the others. They know our history and our capacity to push back the limits, and they expect us once more to produce an extreme car with no concessions to performance. We owe it to ourselves to bring them the best of our know-how, and to offer them the options and accessories they need to push their Trophy-R experience as far as possible.”*

The new MEGANE R.S. TROPHY-R will be launched as a **limited series of 500 numbered vehicles**, on the main Renault Sport markets. Top of the list are France, Germany, United Kingdom, Switzerland and Japan.

Prices **start at €55,000** (France price, varies from country to country).

DESIGN: EXACERBATED TROPHY-R CODES

Paula FABREGAT-ANDREU, director of design for the Renault Sport Cars range: *“New MÉGANE R.S. TROPHY-R is recognisable at first glance with its unique mother-of-pearl colour and touches of red (front blade, lateral stripping, double lateral diamonds, Fuji-Light wheels), its TROPHY-R monograms, its carbon components in the bonnet and rear diffuser, its “shark fin” aerial, etc. In the cockpit, the carbon racing atmosphere is underlined by the Alcantara® racing seats, a material that also adorns the racing steering wheel and handbrake lever. A numbered plaque on the door sill emphasizes the exclusiveness of this limited series.”*

B. TAILORED RADICALITY

The new MEGANE R.S. TROPHY-R proposes the following **options**, available when ordering:

- a kit of **four additional carbon wheels**, delivered in specific individual covers, placed on the subframe provided for this purpose in the rear, and secured by a dedicated Sabelt net.
- **Carbon-Ceramic pack: front brakes with carbon-ceramic discs** combined with **the dynamic air intake** replacing the R.S. Vision headlights in an ultra-exclusive limited series (30 cars),

Renault Sport also offers **accessories dedicated exclusively to the New MEGANE R.S. TROPHY-R, signed R.S. Performance**. To push performance and sporty handling even further, customers will find the range of accessories on the Renault Sport online store:

- **carbon wheels,**
- **adjustable rear stopblock and short suspension spring,**
- **DESS Lithium battery,**

- **6 points Sabelt harness,**
- **intake air duct** for the dynamic air intake,
- dynamic air intake (available individually as an accessory).

For real aficionados the online store also has a specific and distinctive TROPHY-R textile line.

C. MEETING UP WITH THE RENAULT SPORT COMMUNITY

The new MEGANE R.S. TROPHY-R has already started meeting up with the Renault Sport community.

- Its first public appearance was on 24 May 2019 at the **Monaco Formula 1 Grand Prix**, with the drivers from the Renault F1™ Team, Daniel Ricciardo and Nico Hülkenberg behind the wheel.
- It then did a few laps in front of the fans present at the **France Formula 1 Grand Prix**, on 23 June.
- On 5 July, Laurent Hurgon was behind the wheel in front of the motorsport elite at the prestigious **Goodwood Festival of Speed** (Great Britain).
- It will also be **present at all the R.S. Days during the 2019 season**, where all the loyal member of the Renault Sport community and *track day* fanatics will be able to watch it on the track and admire it from close quarters.

Finally, the exclusiveness of the New MÉGANE R.S. TROPHY-R will be there for all to see in the **campaign conducted by Renault Sport on social media**. Using **#Only500**, starting on 25 June and for more than a month, this limited edition campaign enables only the fans with the fastest reactions to discover all the secrets of this exceptional car.

03

PROOF BY RECORDS

A. MÉGANE R.S.: MORE THAN 10 YEARS AT THE HEART OF THE “GREEN HELL” OF NÜRBURGRING

On 5 April 2019, the new MEGANE R.S. TROPHY-R set a new all-time record for front-wheel-drive production cars on the Nordschleife of the Nürburgring, a world-renowned proving ground for the sport's performance. It travelled the **20.600 km in 07:40.100**. It also established a reference time for a production hatch over the 20.832 km of the official complete lap in 07:45.389. **A remarkable performance on this extremely demanding circuit, both for cars and drivers.** It concentrates all the imaginable difficulties into a sequence of bends which seems to be endless, over a distance of more than 20 kilometres.

The story of Mégane R.S. And the Ring has been going on for more than 10 years, and reflects the taste for a challenge that motivates all the component parts of Renault Sport. The car has joined the Nürburgring *industry pool* (10 weeks reserved for manufacturers every year) for endurance tests on parts and vehicles. This story began in 2008 with the very first record in the production car category, and has continued right up to 2019, in a hunt for records where it has become much more difficult to gain each second.

Four “radical” Mégane R.S. Cars, four successive records in the production car category on the Nürburgring (Nordschleife):

- 2008: **Mégane R.S. R26.R** in **8:17**.
- 2011: **Mégane R.S. Trophy** in **8:07.97**.
- 2014: **Mégane III R.S. Trophy-R** in **7:54.36**.
- 2019: **The new MEGANE R.S TROPHY-R** in **7:40.100**

N.B.: The Nordschleife: a new official run. Up until 2019, most of the records were set on the 20.600 km run. Stopwatch started at the end of the T13 zone, and stopped at the start/finish line. Starting in 2019, the official run according to the Nürburgring is the complete lap of 20.832 km: stopwatch started and stopped on the start/finish line (beginning of T13). In this context, the Mégane R.S. Trophy-R time is recorded in the “compact cars” category (production vehicles without any modifications).

B. THE HUMAN CHALLENGE: A RECORD-BREAKING TEAM

To achieve such a record with a production car is a truly astounding achievement. To succeed it was necessary to introduce **commando style teamwork** to keep within the short development time. Methods similar to those used in the Renault Sport competitive sector and associated with the experience in the Formula 1 team.

François-Xavier DELAGE, head engineer for New MÉGANE R. S. TROPHY-R, indeed worked for several years at Enstone, the headquarters of the Renault F1 Team, where agile management is king: *“One of the characteristics of the organisation implemented on this TROPHY-R project is to set up an extremely small team of about ten people, as in F1, continuously seeking to improve performance and working to an extremely tight schedule. Team spirit, the human factor, the proximity between engineers and the driver have been fundamental structuring values: the record bears witness to this!”*

A taste for a challenge which has written a story, now become a legend as the records are broken, making it necessary each time to push back the limit of sporty handling.

THE DRIVER: LAURENT HURGON

Laurent Hurgon is the test driver and tuner for the New MÉGANE R.S. TROPHY-R as the project develops. He was also the driver who broke the Nürburgring record (and the two previous records), and he knows each metre of the circuit like the back of his hand. He is passionate about what he does, and on the racetrack he has his own inimitable driving style. He is contributing to developing this ultimate version as he would with a racing car, in his leading role as the driver. After each test session there is a debriefing phase as in competitive driving, to make adjustments and try new solutions. Each change moves the project closer to ultimate performance.

4 QUESTIONS FOR LAURENT HURGON

Can you tell us about the record-breaking lap?

Laurent Hurgon - Conditions were not ideal, because the weather was cold and damp, but we found the right launch window for take-off. The Nordschleife is an extremely difficult track. It has lots of very fast sections, combined with several very different types of bends. Although I know the circuit very well, it still requires total concentration. But the car was ready, the whole team was behind me, and I was highly motivated to go for a record-breaking time.

How do you approach a car like New MÉGANE R.S. TROPHY-R?

L. H. - It's a car that has to be seen like a competition car. In the same way as a test session, you have to drive a few laps to adjust the car to the racetrack, to the damp weather, your driving style and your preferences. It is vital to start by getting the tyres up to the right temperature, and to try out some load transfers to feel how the car reacts. Customers will be able to adjust the driveability and attitude of the car, the shock absorbers and the tyre pressures, in the same way as on a racing car.

What does it feel like to drive the New MÉGANE R.S. TROPHY-R?

L. H. - The front axle plays an important role, the more you push it the more effective it is, thanks to its negative cambering. It enables you to drive round bends at speeds that are completely off the map in this segment. That means you have to set the rear axle properly to control oversteer. The steering is precise as a scalpel, with its very direct reduction ratio. The brakes are ultra-powerful: carbon brings consistency and bite, so you can brake later and manage gradual braking more effectively. Although the aerodynamics push the car down onto the track, you still have to be ultra-precise in your driving. It's a demanding car that needs you to be humble if you want to learn to control it, but which will be exciting for customers, because there will always be room for improvement!

A few final words.

L. H. - I feel incredibly lucky to be able to contribute to developing such a car: demanding, limitless, delivering the best performance ever from a Renault production car. It's both exciting and extremely rewarding. For the team, the common objective was unusually intense, especially as the company was keeping an eye on all our technical decisions. This is everything I love about Renault Sport, and this car is the crystallisation of this spirit and experience!

TECHNICAL DATA SHEET

NEW MÉGANE R.S. TROPHY-R

Fuel Petrol SP95 E10/SP98 unleaded
Emission control standard Euro6 D-temp

ENGINE

Type Four-cylinder direct injection turbo
Capacity (cc) 1798
Bore x stroke (mm) 79.7 x 90.1
Number of valves 16
Maximum power kW (hp) EEC 220 (300) / 6 000 rpm
Maximum torque Nm (m.kg) EEC 400 (40.8) / 3 200 rpm
Timing type Chain-driven
Stop & Start Yes
Particulate filter Yes

GEARBOX

Type Manual
Number of gears 6

PERFORMANCES

Maximum speed (kph) 262
Standing kilometre (s) 24.5
Acceleration 0-100 kph (s) 5.4
Acceleration 80-120 kph in 3rd gear 2.9

FUEL CONSUMPTION AND EMISSIONS

NEDC urban cycle (l/100km) 10.6
NEDC extra-urban cycle (l/100km) 6.4
NEDC combined cycle (l/100km) 8
NEDC CO₂ (g/km) 180
Fuel tank capacity (l) 50

CHASSIS AND SUSPENSION SYSTEMS – STEERING & AXLES

Variable electric power-assisted steering Yes
Turning circle diameter between kerbs (m) 10.3
Type of front axle Independent pivot front axle
Type of rear axle Specific H rear axle

BRAKES

Front Ventilated disks, 355mm
(optional carbon-ceramic disks, 390 mm)
Rear Ventilated disks, 290mm
Emergency Brake Assist Yes
Electronic Stability Control (ESC) Yes

WHEELS AND TYRES

Wheel rims/homologation J19
Standard tyre size 245/35 R19

WEIGHTS (kg)

Minimum unladen kerb weight 1306
Gross vehicle weight rating 1650