

TWINGO RENAULT SPORT R2 & R1



2010



PRESS KIT

RENAULT SPORT



NOW EVERYONE CAN ENJOY RALLYING!

Renault Sport Technologies is expanding its 'rally customer–racing' range with the introduction of Twingo Renault Sport R2 and Twingo Renault Sport R1. Designed for drivers looking for a sports car which is modern, affordable and reliable, these two next generation products make up the first level of a comprehensive range of cars that also includes the various versions of Clio Renault Sport R3 Access and Maxi.

In addition to its success in world's top racing events, Renault Sport's history also belongs to the models that have enabled entire generations of drivers to pursue their passion for the sport. In the same spirit as cars such as the R8 Gordini, the Supercinq GT Turbo or the group N Clio Renault Sport 'Ragnotti', the Twingo Renault Sport R2 becomes the latest affordable sports model aimed at amateur drivers.

Like Twingo Renault Sport, the racing version offers day–to–day driveability and first class performances. The responsive, balanced chassis features the same characteristics as the production model and has been prepared specifically to offer improved reliability and performance levels whilst keeping servicing costs very competitive. In addition to strengthening certain parts, Twingo Renault Sport R2 is fitted with compression– and rebound–adjustable shock absorbers, enabling it to adapt to all driving styles.

The specifically prepared 4–cylinder 1.6–litre 16V engine develops a mighty 160bhp (118kW) at 7,000rpm, equivalent to an extra 33bhp compared with the production engine. Combined with a five–speed sequential gearbox and steering wheel–mounted joystick controls, the engine generates a maximum torque of 180Nm at 5,500rpm, giving it a wide power band.

From the design phase right through to testing, Renault Sport Technologies took the needs of amateur drivers into account. Making use of its extensive expertise in designing rallying cars, the technical team developed an accessible, easy–to–drive and attractively priced car, both to buy and maintain.

Twingo Renault Sport R2 already has a little sister: a R1 version has also been awarded FIA homologation. Simply featuring some additional safety equipment compared with the R2, this model enables a much wider audience to get into motor racing at a greatly reduced cost.

Renault Sport Technologies therefore becomes the first manufacturer to offer a complete range of Group R cars, from Twingo Renault Sport R1 to Clio Renault Sport R3 Maxi.

Twingo Renault Sport R2 comes in the form of a racing kit featuring all the specific parts (except for the tyres). Customers who buy the kit will receive a special offering entitling them to a preferential rate for the purchase of a Twingo Renault Sport at a dealership. This optional solution allows customers to obtain a complete, fully registered production car. Kits will be going on sale in early April, 2010, at the price of 27,990€ excl. tax.





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SECTION 1

DESIGN AND ON-BOARD COMFORT: SPORTS PERFORMANCE, INSIDE AND OUT

Echoing the same sculpted design seen on Twingo Renault Sport, the rally version accentuates the production model's naturally sporty looks. The only strikingly different exterior design feature on the racing version is the optional roof-mounted air intake.

The car's compact proportions and sharp styling, which in large part comes from the inclusion of a wide air intake grille in the front bumper, sculpted side sills and widened front and rear wings, builds on the already distinctive looks of Twingo Renault Sport, the perfect platform for the R2 version.

Twingo Renault Sport R2's interior clearly attests to RST's permanent drive to improve efficiency. Twingo Renault Sport R2 has the same dashboard and central console as on the production model, but comes with two bucket seats with reclined head restraints to improve weight distribution. An LED instrumental panel displays all the necessary information, both during the special stages for the driver and at the service area for the technical team. A data acquisition system is also available as an option.

On the right of the steering wheel, the sequential dog box gearshift lever is within easy reach, as is the hydraulic handbrake lever (optional). All of the electric controls are located on the central console, between the driver and co-pilot.



SECTION 2

GROUND LINK TECHNOLOGY: RELIABILITY, SAFETY AND PERFORMANCE

In looking to design a car that is simple to drive, reliable and effective on all surfaces, from the smoothest tarmac to the roughest dirt roads, Renault Sport Technologies opted for tried and tested technological solutions and reused many production parts.

OPTIMISED RUNNING GEAR

The front suspension deploys McPherson technology, with aluminium lower arms and a standard anti-roll bar. Optionally, the rubber bushings can be replaced with ball joints, delivering greater driving precision. Twingo Renault Sport R2 comes with hydraulic power-assisted steering, ensuring it can meet the specific demands of racing, regardless of the length of the special stages.

Also derived from the production model, the rear suspension is based on a programmed deflection torsion beam system. Optionally, it can be reinforced at strategic points to improve its resistance on all surfaces.

A WIDE RANGE OF POSSIBLE SETTINGS

Equipped with the latest in compression- and rebound-adjustable twin-tube shock absorbers, Twingo Renault Sport R2 has a broad range of settings, meaning that it can be adjusted to suit every driving style.



POWERFUL AND DURABLE BRAKING SYSTEM

Fitted with standard callipers and discs, the braking system also comes with a set of brake pads specifically designed for racing. At the front, Twingo Renault Sport R2 is fitted with 280mm-diameter ventilated discs and 240mm solid discs at the rear.

The one-piece aluminium wheel rims are available in 6.5x16" (tarmac) and 6x15" (dirt) sizes and can be fitted with 195/50 R 16 (tarmac) or 195/65 R 15 (dirt) tyres.

AN ADDITIONAL GRAVEL RALLYING KIT

The optional "gravel rallying" kit comprises the four specific springs, the ball joints for the front axle, the reinforced rear axle and protective elements. These technical decisions help to keep the cost of buying and servicing the car under control.

SECTION 3

ENGINE AND GEARBOX: FIRST RATE PERFORMANCE LEVELS

Twingo Renault Sport R2 features the normally-aspirated 1,598cc 16-valve K4M RS engine developed by Renault Sport Technologies, ensuring the car is effective, reliable and fun-to-drive.



The main changes concern the pistons, camshaft, flywheel, exhaust system and the addition of a specific air box. This special preparation garners the engine an extra 33bhp compared with the production model, reaching a mighty 160bhp (118kW) of power at 7,000rpm. Maximum torque (180Nm) is reached at 5,500rpm.

An ECU specifically developed for racing manages engine (power supply and ignition) and gearbox operations. It operates in conjunction with a specific electrical wiring harness and may be combined with a data acquisition system (optional).

Twingo Renault Sport R2's engine has been designed to cover 2,000 kilometres of timed special stages between each service.

A SEQUENTIAL GEARBOX

The five-speed sequential gearbox comes with a limited slip, auto-locking differential (ZF type). Gearshift is managed via a lever positioned right next to the steering wheel, which is combined with an engine cut-out switch. This means the driver doesn't need to take his foot off the accelerator while moving up through the gears.

The clutch is made up of a hydraulically-controlled single disc. Like the gearbox, it can be used for both dirt and tarmac rallying.

Two final torque settings enable the final gear ratios to be adjusted according to the specific characteristics of each event.



SECTION 4

SAFETY:

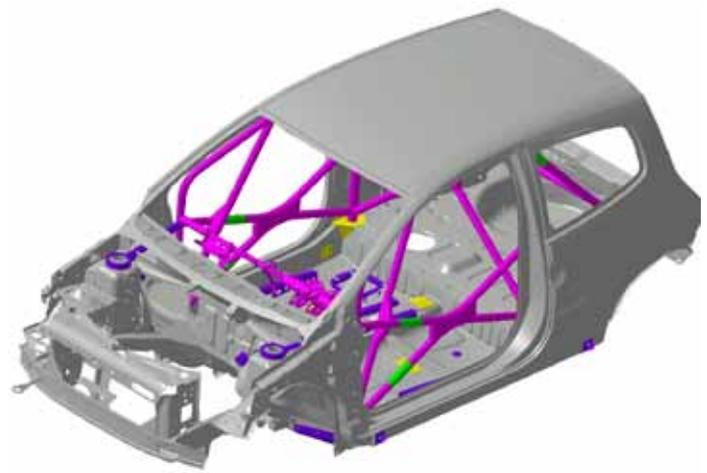
RENAULT SPORT TECHNOLOGIES' KNOW-HOW

In production and racing alike, safety is a priority for Renault Sport Technologies. Twingo Renault Sport's structure has been reinforced and stiffened to increase passive and active safety levels.

The original body has been reinforced and now comes with a welded roll cage which complies with the latest specifications set out in Group R regulations and approved by the FIA after a crash test. The roll cage, made of more than 40 metres of steel tubing, contributes to the strength of the survival cell.

Twingo Renault Sport R2's interior is fitted with the latest equipment, including bucket seats and six-point safety harness compatible with the HANS system. As an option, it is possible to select the bucket seats with head restraint used on Clio Renault Sport R3. The inner door trims have been removed to allow a protective panel made of composite materials to be installed.

The car is equally fitted with an electrically-controlled automatic fire extinguisher system and a master switch.



SECTION 5

TWINGO RENAULT SPORT R1: BACK TO BASICS

At the outset, motor racing was all about drivers taking on each other in their own cars. Renault Sport Technologies aims to return to the origins of racing, with Twingo Renault Sport R1.



Renault Sport Technologies therefore becomes the first manufacturer to obtain homologation for a car in this entry-level motorsport category. This basic version can take part in all regional, national and international rallies at a greatly reduced cost.

Twingo Renault Sport R1 is a production car fitted with some essential safety equipment. It gives drivers with very limited budgets the opportunity to express their passion for racing in a modern and safe environment.

Starting with the Twingo Renault Sport base, the R1 version is fitted with the same welded roll cage as Twingo Renault Sport R2, but it also has two additional protective tubes and is bolted to the body so as to facilitate assembly. The engine and gearbox are identical to the production model. A short torque setting will be homologated to improve performance.

Provided FIA regulations are complied with, it is possible to convert Twingo Renault Sport R1 to Twingo Renault Sport R2.

SECTION 6

NEW TROPHIES AND SUPPORT FROM RENAULT SPORT TECHNOLOGIES

Renault Sport Technologies provides high quality technical support for all its range of racing products. Every year, Renault Sport Technologies' operations engineers attend over one hundred national and international rallies (Junior World Rally Championship, IRC, ERC, etc.)

A spare parts store, as well as constructors' engineers and technicians will be present at the various national trophies that will be run throughout Europe – in France, Italy, Switzerland and a few other countries – to support drivers who have chosen Twingo Renault Sport R2.

Ongoing support, including a hotline set up back in 2003, ensures that all customers remain in direct contact with Renault Sport Technologies' engineers, either by telephone or email.

This support service means that drivers and teams can benefit from Renault Sport Technologies' expertise as soon as they receive the kit and be supervised during the assembly of the car.

Feedback provided in this way also allows Renault Sport Technologies to gather, analyze and relay any useful information to all its customers in real time.

An extranet site is made available to Renault Sport customers, where they can download technical and sales documentation, technical updates, assembly instructions, setup sheets, etc.



TECHNICAL DATA SHEETS

TWINGO RENAULT SPORT R2		TWINGO RENAULT SPORT R1
CHASSIS		
Type	Steel monocoque with welded roll cage	Steel monocoque with roll cage welded and bolted onto bodyshell with sleeves
Bodywork	Steel	
ENGINE		
Layout	Front transversally-mounted	
Type	Renault K4M RS – 4 cylinder – 16 valve – 1,598cc	
Bore x stroke	79.5 x 80.5mm	
Ignition	Built-in Magneti Marelli management system	Production
Maximum power	160bhp (118kW) at 7,000rpm	98kW (133bhp) at 6,750rpm
Maximum torque	180Nm at 5,500rpm	160Nm (m.kg) at 4,400rpm
Max. engine speed	7,500rpm	7,000rpm
TRANSMISSION		
Type	Front-wheel drive	
Gearbox	Sequential 5-speed gearbox + reverse	5-speed gearbox + reverse, type JR5
Gearshift	Steering-wheel mounted joystick	H-shaped grille
Differential	ZF type, limited slip, auto-locking differential	open for short torque
Clutch	Hydraulically-controlled single disc	Production
AXLES AND SUSPENSION SYSTEMS		
Front	McPherson-type strut, two-way adjustable shock absorbers, adjustable camber settings	McPherson-type strut
Rear	Programmed deflection, torsion beam suspension with coil springs and two-way adjustable shock absorbers	Programmed deflection, torsion beam suspension with coil springs
Brakes	280mm-diameter ventilated discs (front) and 240mm-diameter solid discs (rear)	
WHEELS		
Rims	One-piece aluminium wheel rims, 6.5x16 (tarmac) and 6x15 (gravel)	One-piece aluminium wheel rims, 6.5x15
Tyres	BFGoodrich 195/50 R16 (tarmac) and 195/65 R 15 (gravel)	BFGoodrich 195/50 R 15
DIMENSIONS, WEIGHT AND CAPACITIES		
Length	3,607mm	
Front/rear track	1,465 – 1,445mm	1,460 – 1,430mm
Fuel tank	40 litres	
Kerb weight	ballasted to 1,030 kg (per regulation)	
PRICES		
Kit	€ 27,990 € exc. VAT	TBA
Registered new Twingo Renault Sport	€ 10,900 € exc. VAT (French price on December 1 st , 2009)	



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