

RENAULT CLIO V6



The frog's bollocks

Yes, it's a Clio – a mid-engined V6 monster pumping 250bhp and topping 160mph, and it's going into production. Hold tight for the maddest Renault road car since the mid-engined 5 Turbo
Story by Richard Bremner. Photography by Tim Kent

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All four wings, door skins, front and rear bumpers and side skirts are moulded from composite materials and made by French company MOC. Around 45 percent of the car is standard Clio, but you'd never know it



Transverse mounting might not be the obvious way to squeeze a V6 into a small hatch but this is no obvious car. It will achieve 60mph in less than six seconds, and can exceed 160mph even in road trim...

IT'S A SERIOUS BUSINESS, PRODUCING MAD machinery. In the little-known Parisian suburb of Viry-Châtillon lies a newish, bigish, grey factory unit, from where Renault Sport masterminds the madness of producing 3.5-litre V10 Formula One engines that burst forth with 750bhp for a few hours on the odd weekend, before needing a complete rebuild that sees most of their internals being chucked away. These are also the premises in which a few enthusiasts came up with the idea of producing a sports car – the Spider – with no windscreen and no roof. And where the lunacy of grafting a 285bhp transverse V6 behind the front seats of a small shopping car was decided on. When they're

not busy with cars, the 250-strong staff have also built an engine for light aircraft and a sledge. From carbonfibre.

Renault Sport is La Regie's competition division, not only making the race engines that allowed Renault an instrumental role in winning six F1 manufacturers' championships, but also, apparently, girding itself for a Formula One assault as a team in its own right. Of which more below. In a small way, the crazy Clio V6 is a part of this.

But first, a bit more about the car itself. No question, it's a hotrod. As a road car, it has a little less power, making do with a mere 250bhp compared with the 285bhp of the racer. However, it weighs just 1200kg, giving it a power-to-weight ratio of 208bhp per tonne, which tops the 196bhp-per-tonne Honda NSX and isn't far off the 224bhp-per-tonne of the Porsche 911 Carrera. So it will be very quick, just as the car that inspired it, the Renault 5 Turbo, was really very quick.

They have a lot in common, this pair. Only two seats, bodies that are generous in width but short on beauty, fat tyres of differing sizes front to rear, loads of power and a competition character. But while the 5 Turbo did Renault some good in world rallying in the early '80s, the Clio V6 has been conceived for a one-make European race series (called the Clio Renault Sport Trophy) to replace the Spider Trophy. So in a sense, it won't be seeing any real competition at all.

THE LUCKY MAN WHO PRESIDES OVER THE ACTIVITIES of that grey building on the outskirts of Paris is Christian Contzen, a genial man whose automobilia-packed office is a shrine to his love of cars and motor racing. Contzen (who incidentally does not seem mad at all) explains that the Clio V6 was born out of a brainstorming session directed at conceiving a new sports car to replace the Renault Spider, which was always to have a short life. 'We wanted an

innovative and bold car based on a production model, and we decided to use the Clio 2 because it was new. The idea was to adapt the 5 Turbo concept bearing in mind the prerequisites of a modern car, such as active and passive safety, as well as providing great steering feel and driving pleasure.

'To begin with we met the challenge very quickly. The project got the green light in February 1998, and a test car was on the road before the Paris Motor Show in September. This was feasible thanks to modern equipment – computer-aided design and calculation methods – because we changed the body substantially.' Not that you need a computer to work that out, so obviously distended is the Clio's shell to accommodate a 125mm wider track at the rear and a 108mm broader track up front. The wheelbase has been stretched a smidgin too, placing the 17in alloy wheels closer to the corners of the car for heightened stability. Mind you, the rims help here too: they're 7.5in across up front, and 8.5in at the rear. Which is wide.

The new bodywork is composite, designed and built by MOC, a French company. All four wings, the door skins, the front and rear bumpers and the side skirts are moulded from the material, to a style developed by Renault's design department. And if you can't call the Clio V6 an object of beauty, it is nevertheless very tidily styled – and not lacking in visual drama.

Beneath the bulges, entirely new chassis longerons and cross-members have been constructed to support the V6 powertrain, and provide suspension pick-up points. The front suspension is MacPherson strut, while at the rear is an entirely new arrangement which Renault labels three-axis multibar. In practice, the wheel is strut-suspended, and located by radius and track control arms that are mounted to a subframe beneath the powerpack.

That 3.0 V6 powerpack is taken from the Laguna and, in race form, has been honed to deliver 285bhp rather than the standard 194bhp, a gain achieved through revised cams, a higher compression ratio and a twin-plenum induction system. At the moment, Renault is unsure as to whether all these modifications will be used for the race engine and the 250bhp road version because it is still testing. The engine was chosen partly because it was there and can deliver the performance, and partly because Renault wants to stress its ability to build big engines, in preparation for its onslaught on the big car market with production cars inspired by the Vel Satis concept.

Packaging a V6 transversely might seem rather ambitious when you're trying to install it in the rear end of a baby hatchback, but remember that V6s aren't especially long, and the Clio was going to get

ACTION PHOTOGRAPHY BY BERNARD ASSET



... Interior is fairly standard, lacking R5 Turbo's crazy design, but you get leather bucket seats, white-faced instruments, alloy gearlever housing and aluminium-effect painted highlights

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massively wider anyway, in order to accommodate wheels big enough to handle the performance. And, as Contzen points out, an advantage of achieving power with capacity rather than turbocharging is that the engine is much easier to cool. The 5 Turbo had no fewer than 13 air intakes to keep its tiny 1.4-litre pushrod motor from blowing a gasket.

Claims for the Clio's sprinting power are a bit vague at the moment, but it's likely to break six seconds to 60mph, and top around 160mph. Whatever, there's no doubt that it will have the capacity to thrill speed-seekers as readily as its turbocharged predecessor did. Whether it has the same predilection for spinning is another issue. This is something Contzen and his crew hope to have dialled out of the car before it turns a wheel, despite its not entirely helpful 42 percent front, 58 percent rear weight distribution.

'In the past,' says Contzen, 'with the Renault 5 Turbo, we built up the prototype by hand. But with this car, part of the project was to see if it was possible to build a car entirely on computer.' Not that designing a car electronically removes the need to test it, of course – tyre behaviour, in particular, is difficult to predict on-screen. However, the performance of a new engine design can be predicted with remarkable accuracy, says Contzen.

One advantage of designing on computer is speed, and that will be very useful for Renault Sport since this year it will be supplying no less than three teams with Formula One engines through Mecachrome and Supertec, as well as keeping itself at the forefront of grand prix engine technology. 'We will maintain the know-how,' says Contzen, 'so that if one day Mr Schweitzer [the Renault boss] wishes to return to F1, we will have high performance immediately.'

You can bet that Renault *will* return to Formula One – not merely as an engine supplier but as a team in its own right. Contzen

A sort of auto Willy Wonka

Christian Contzen is the director general of Renault Sport. Or, to put it another way, he is the man in charge of one of the best toyshops in France, where they build F1 engines, sports cars, light aircraft engines and carbonfibre sledges. Contzen, who was behind the Sport Spider, is pushing the Clio V6 project through, and reckons there will be plenty more niche models like this to come from his toy factory

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doesn't deny it. And what has that got to do with the Clio V6? Well, it might just be useful to know how to design an entire car on-screen, speedily, if you are a manufacturer of racing cars. And what's the harm in getting your hand in early by building an extreme road car?

Just to provide an extra challenge, as well as cutting costs and easing the task of making the car, Renault Sport attempted to use as many stock production parts as possible. So, despite the Clio V6's major dissimilarity to any other production Renault, its designers have succeeded in building an impressive 85 percent of it from the company stores. Around 45 percent is standard Clio, while 40 percent is drawn from other Renault models, including suspension parts from the 2000 model-year Laguna. Much of the 15 percent that is unique to the car consists of bodywork, only the bonnet, roof, tailgate and certain elements of the shell being standard Clio 2.

So, unlike the original 5 Turbo, which had one of the wildest interiors ever seen in a production car, the Clio V6 cabin remains fairly standard. You get leather-trimmed bucket seats, white-faced instruments and a rather fine aluminium gearlever housing – as well as painted aluminium-effect highlights on doors and centre console – but that's it. Apart from the absence of a rear seat, of course, whose home has been annexed by the engine.

What designing by computer also allows is the speedier develop-

ment of special editions like the Spider and the Clio V6. 'We need to develop the know-how,' says Contzen. 'But Renault Sport has a future developing cars like this.' In the immediate future, it has asked three companies to tender for the job of putting the roadgoing Clio V6 into series production at Dieppe, where the last Spiders are currently being assembled, and where the Clio Trophy racers are being built. One of these is Matra, while another is very probably British, which would be unusual for Renault. But Contzen reckons, 'There's real know-how in the UK for small runs. We cannot ignore this as a global player with a global outlook.'

The challenge for the winning company, apart from working out how to physically assemble the road version, is to achieve volume production car quality levels, and duplicate them. Contzen is hoping the car will be in production in 12 to 15 months' time, and that there will be a total run of up to 2500.

The challenge for Renault is to achieve the driving experience you'd expect of a top-of-the-range model that comes complete with electric windows, air-conditioning, twin airbags and so on.

The challenge for you, should you want one and be able to afford the £30,000 it is likely to cost, is to get one, because the order book is getting full. And then you'll have to wait. But the thrill should be more than worth it.

Wild though it may look, this car is going to be built by Renault, and we will be seeing production versions in the UK in about 12 months time. Oddly enough, the road version may end up being built by a British company