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CAYMAN UNLEASHED

Can RPM Technik's wild 981 CSR trump
a 981 GTS, 718 GTS or GT4?



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GTS
Driven**

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A white sports car, likely a Porsche Cayman, is shown from a low front-quarter angle, driving on a paved road that curves into the distance. The car's headlights are on, creating a bright glare. The background is a hazy, mountainous landscape with green hills and some buildings visible in the distance. The overall mood is serene yet dynamic.

FOCUS GROUP

Its most track-focused CSR build to date, does RPM Technik's 981 Cayman CSR offer a genuine alternative to a 718 GTS, or even a GT4?

Story: Simon Jackson Photography: Gus Gregory





*"We've gone for some
things that have never been done
on a Cayman before"*



RPM Technik has been creating re-engineered Porsches under its CSR programme since 2010. The first, a 986 Boxster, emerged in 2012 and was subsequently featured in these very pages, off the back of its acclaimed success further CSR cars followed. Both 996- and 997-based 'CSR' and 'CSR Retro' variants continued the lineage over time, offering packages mixing the very best high quality aftermarket upgrades with unique improvements designed and manufactured in-house at RPM Technik's Hertfordshire HQ. Though each car differed, all benefited from a carefully considered engineering-led revamp intended to deliver a sharpened, driver centric, Porsche. Moreover, a car that blended a heightened proficiency on road and track without sacrificing usability and practicality. Extracting greater levels of driving pleasure from a Porsche without erasing its original essence is no easy task, but as each

of the 23 CSR cars built to date confirm (part of the 'CSR register' featuring unique chassis numbers), RPM Technik's specialist off-shoot department is now an accomplished authority on such matters.

The latest car to join the CSR range is RPM Technik's most track-bias offering yet created. It's perhaps its most challenging prospect too, for this CSR is based on a platform that, even in stock form, delivers a wholly satisfying drive: the 981 Cayman S. Promising not just to draw on its previous experience, but to push things further than ever before too, RPM Technik's latest CSR has been much anticipated throughout its long gestation.

"It's been a long-awaited car in the evolution of the CSR model range," stated Darren Anderson, RPM Technik's Commercial Director. "We've been aware of the capability of the 981 Cayman as a CSR for many years, we've spent quite a long time in the evolution

of it because we wanted to get the engineering correct – to get it as focused as we could."

The challenge at hand was not an uncomplicated one. In its factory form the 981 Cayman chassis is excellent, and in S guise the available power from its normally aspirated 3.4-litre flat-six, impressive. Porsche itself however has already demonstrated the potential of pushing the 981 a bit further with both the (hot) 981 Cayman GTS (p70) and (hotter) GT4. Any prospective 981 CSR would have to innovate, to take things a stage further than all three factory models (S, GTS and even GT4), something not lost in any fashion on Darren and his team:

"We've improved upon the areas that we felt could be improved upon," he explained. "Some of it we knew would work from our other CSR models, but in terms of engineering, we've gone for some things that have never been done on a Cayman before."





All CSRs are designed to be modular, which means customers can opt for as many or as few of the alterations on offer as they wish. By the same token they do not have to complete all of the transformation work in one hit, should they prefer instead to alter their car gradually over time. Thankfully (for our feature) the car you see here sports everything currently available, it's all the better for it, addressing all aspects of the 981 Cayman's makeup. A major focus for the project was its drivetrain, at the centre of which comes the fitment of a CSR lightweight clutch and flywheel, CSR low ratio crown wheel and pinion, and CSR limited-slip differential. In conjunction with a short shift kit borrowed from the GT4, these changes look to address perhaps the most common criticism levelled at the 981 – its tall gearing – while gifting it a higher-revving nature for further sporting intention.

Additional increases in performance have been achieved via the inclusion of stainless steel exhaust headers for improved gas flow, a K&N air filter and COBB access port, allowing the car to run in different map modes. At what RPM Technik calls 'Stage One', the car recorded an improvement in power of some 10 percent over its original 320hp that Porsche provide it with from the factory, meaning the CSR sits somewhere north of 350hp – though rest assured that's a conservative estimate. Also the fitment of a lightweight battery means those power gains are amplified by significant weight savings above the car's centre of gravity.

Naturally the chassis has been tweaked to best exploit any gains in performance already mentioned. The CSR suspension package comprises a mix of Öhlins coilovers (RPM Technik first used the Swedish brand's products on its 997 CSR), themselves adjustable in almost infinite fashion to enable the car to be fine-tuned for purpose. Modified front drop links enable the use of GT4 anti-roll bars on the factory uprights, in addition comes a PASM delete for the system's services are no longer required here. The brake setup was an area of intense research and development, and in improving it RPM Technik has innovated. The CSR brake upgrade comprises a bespoke 355mm six-pot calliper and floating disc at the front, the first time this has been seen on a 981 Cayman. A floating disc is a weight-saving two-piece affair constructed from steel and aluminium designed to negate warping under extreme heat, achieved via the different expansion rates of the metals. To match their ability to cope with higher temperature cycles are performance pads, so too Performance Friction brake fluid and braided brake lines from a 911 Carrera Cup car. Complimenting the savings in weight afforded by the brake upgrade, worth 1kg per corner incidentally, are a set of lightweight 19-inch HRE FF15 wheels wrapped in Michelin Pilot Sport Cup 2 tyres, these further reduce the car's unsprung weight. In total 3kg has been trimmed off the front axle, 2kg from the rear.

Though this car goes further than previous

*These changes look to address perhaps
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the 981 – its tall gearing*





CSRs in many respects, its styling is actually more reserved than we've seen before, largely retaining the 981's clean lines while borrowing from the aerodynamic benefits enjoyed by the GT4 in some areas. Indeed, the 981 GT car lends its front bumper (modified with a mesh grille, running lights, and tow strap), rear diffuser and arch liners (these provide greater brake cooling through additional air ducts). And this being a CSR car there are further changes unique to it, the fixed rear spoiler being the main talking point. So aesthetically speaking it sits somewhere between a GTS and GT4, but no alterations have been made without consideration for aerodynamics. What we can take from its specification is that the CSR's form is functional, might the drive it offers pay out as a result?

Should it somehow have escaped your attention that you're sat at the wheel of a unique 981, starting this car immediately communicates that this is a Cayman like no

other. It's not overtly loud, this specific car isn't fitted with CSR switchable silencers due to its propensity for track work, and tracks having enforced noise limits. But a road-bias version of this CSR could be made far louder, yet it sounds purposeful enough regardless. There's a gravelly note on idle on account of that reworked flywheel, which is reminiscent of a GT or Rennsport 911, highlighting the focus this package of modifications makes on the gearbox and drivetrain. It's somewhat unusual to find a 981 Cayman S with a manual gearbox, this one however is like no other you'll have experienced. It snicks into gear with a satisfying positivity, the throw is certainly both shorter, and the gate tighter, than any non-GT Cayman I've experienced. And then the instant you get it rolling it hits the ground running – fast.

The engine no longer feels in any way lethargic, its free-revving nature is a joy to navigate right through the rev range, the eagerness it delivers is addictive. It all comes on

song in a gradual fashion early on, but as the revs begin to build faster after about 3,000rpm, there's a distinct increase in overall ferocity. It almost feels turbocharged in a way, such is the nature of its frisky power curve. I'd wager the estimated power figure of 350hp is indeed a conservative one as we'd been told – this CSR feels more powerful than that to me. In comparison with the car upon which it is based it's chalk and cheese in terms of the way it reacts to its driver, the close-ratio gearbox being a particular highlight, as Darren confirms:

"The 'box is the defining part of the driving experience in many ways," he said. "On its own it would be great, but combining it with the lightweight clutch and flywheel means you get the double benefit. Not only does it whiz through the gears that much quicker, it is that much more responsive too, you've got that free-revving character."

Indeed you do, RPM Technik has extracted a great deal of latent character from the 981

PACKAGE PRICING:

The 981 Cayman CSR is a modular vehicle, meaning customers can opt for individual elements if they so wish, with pricing as follows:

Suspension: CSR coilover suspension (Öhlins), GT4 anti-roll bar, CSR Geometry setup and corner weighting, £5,000.

Body: CSR bodywork consisting of GT4 front bumper with CSR lighting and track pack, GT4 splitter, GT4 rear diffuser, GT4 arch liner, CSR rear spoiler, graphics package, CSR inverted mirrors upgrade, 19-inch HRE FF15 wheels with Michelin Pilot Sport Cup 2 tyres, £9,550.

Drivetrain: CSR LSD and setup, CSR low ratio crown wheel and pinion, CSR lightweight clutch and flywheel and short shift kit, £9,300.

Brakes: CSR 355mm six-pot calliper and floating front disc upgrade, performance pads all round, Performance Friction brake fluid, braided brake lines, £4,600.

Engine: Exhaust headers in stainless steel, K&N air filter and COBB access port, £5,050.

Interior: Harnesses, CSR gauges, colour-coded trims, carbon sill inserts, £3,250.

Lightweight battery: £2,150.



Cayman S, and as a result its driving experience is now on a par with that of the larger-engined GT4 from Porsche's own Motorsport department. Interestingly, and perhaps a reason for that, is that RPM Technik used its own Acid Green GT4 to benchmark against this latest CSR, making the comparison is quite relevant.

"There's a lot to be said for the GT4 and the punch from the 911 engine in many ways defines it... The CSR is defined by everything else," Darren commented. "It would be an interesting test to put a GT4 up against it, but it's not trying to be a GT4 – that's the difference here. It's not a difficult car to drive on the road but it's exciting, more so than a GT4."

I wholeheartedly agree with Darren's assessment, which is a result of the entirety of this package, its mix of quality components and not one single isolated element. While the changes to its drivetrain serve to impress, so too do the brakes as soon as you haul-up to your first stop. Even on the road the newly-

developed floating calliper setup is a noticeable improvement over the standard S stoppers, featuring as it does bespoke mountings and bells arrived at via intense research and development. They deliver confidence, a depth of feel and bite that is sure to only get more pronounced as they are worked harder in a track environment. They perhaps do not offer quite the same level of performance as a factory ceramic setup might, but by all accounts they are not trying to compete and they are, importantly, not too far behind at all – they're cheaper to purchase too!

The suspension setup is something the team call 'a well-proven and developed route', but it is constantly under evaluation, indeed RPM Technik is already looking at future improvements. The ride is without question stiffer than you'd find on any normal 981 Cayman S, but in this current guise it offers a level of pliancy that makes it easy to live with on the road. From behind the wheel

it's lighter on its feet, the result in part of the aforementioned brake setup and HRE rolling stock – wheels known for both being lightweight and strong – reducing unsprung weight. It's not just a matter of bolting parts on here though, a large part of the CSR's new found lithe nature and focus can be credited to it as a package. Its geometry setup, and a search for the optimum ride height is likely the most unspoken magical element in all this. I'm impressed, and I'm not alone, this CSR has been signed-off by former British Touring Car and Carrera Cup champion, Tim Harvey, who has been working with RPM Technik since the start of 2017. Having a professional racing driver finesse the car's setup surely adds a further dimension to its prospect. And, while he's been involved in the development of this base car, Tim will also take an active involvement in its future development too, looking at matching suspension and drivetrain options for best drivability.

"Tim felt that the lower and medium speed setup was bang on," said Darren, visibly chuffed. "I think that during high-speed cornering it's right on the limit, it almost goes into a neutral four-wheel drift – and you're traveling very, very fast at that point!"

That progressiveness is tangible even during road use, where the car is loose enough to excite but forgiving and progressive too, although we have not experienced this CSR on track it sounds very much like that handling fluidity remains during quicker circuit use. And it is that duality, whereby certain elements of this car work for both road and track use, that is really the CSR USP. This extends into every element of its makeup – even the position of the pedals have been tweaked slightly for heel and toe action. The base car used here came with factory-fitted Sports bucket seats, but full harnesses have been fitted, the mounts for which took quite a bit of R&D for they're not simply drilled through the floor, but rather are mounted in a factory-esque fashion, ensuring the belts sit with the correct orientation:

"It is things like this, some of the smaller things we've done that you don't see, that has actually taken a lot of R&D," Darren admitted. "If a base car didn't have factory buckets, we'd look to fit Recaros, SPGs or Pole Positions."

The cabin in this car therefore has a factory feel to it, yet there are a few unique CSR additions, such as subtle colour-coding and

CSR badging (the custom rev counter being the most obvious of these). It's similar to the exterior styling tweaks, subtle by comparison with CSRs of the past but enough to feel special, ultimately nothing has been done just for the sake of it – inside and out.

"There was an aerodynamic consideration to everything we've done," Darren explained. "We didn't fit a large rear wing in the same manner as the GT4 because it wasn't necessary. From a styling point of view we've achieved something that's pumped-up enough to look individual, but that is subtle at the same time – it's designed to catch your attention."

The incremental improvements made during this car's long gestation period have clearly benefited the quality of the end product. Feedback from everyone who has driven it on track has been positive during its development, and it's clear that this iteration we find ourselves faced with today blends well its usability on track and road. Yet the whole lot is completely adjustable, it can be made softer or stiffer, tailored to individual circuits, or cycled between track or a more road-friendly style at any point. Indeed, the masses of adjustment possibilities is what attracts many to the idea of a CSR, some choosing to leave their cars setup somewhere in the middle for the best of both worlds.

"With that level of adjustment, it means that if you did come to sell your CSR, a new owner can get the exact setup that they want – even

with a GT4 that adjustment is limited," Darren explained. "The envelope of what it can do is so great, that's where the CSR wins because you can run it in a softer more compliant road setup, and very easily tweak it to do some serious track work. Or you can alternate it – somewhere in the middle. What some people do is have their CSR with a blend of the two, and that's where the setup stays."

Of course all of the adverts created for this Cayman are transferable to a 981 Boxster, and GT4. For example the low ratio crown wheel and pinion, which is such a big innovation here, goes straight into the Boxster transmission and is also under development for fitment to the GT4. But ultimately what this car has set out to do is to extract dormant potential from the 981 Cayman S, and on that front it has excelled.

"In many ways it has exceeded what we felt was achievable," Darren said. "To be able to command such a great driving experience out of what started life as a stock Cayman S, is something we're very proud of..."

Without doubt this CSR fulfils its original brief, and in doing so it has become a genuine alternative for those for whom a GT4 is perhaps out of reach, and moreover anyone who feels the latest generation of 718 Boxster and Cayman might be missing a bit of fire from its belly, of whom we're certain there will be more than a few ○

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"In many ways it has exceeded what we felt was achievable..."

