

GOOD TO



BE BACK

Cargraphic's 997 GT3 RSC is more than 100 kilos lighter than standard and produces 465bhp. Sound like a recipe for fun? Let's find out.

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GT3RSC 40

H&R



“I thought that our 996 GT3 RSC was the quickest car we could build but this thing is unbelievable.” Cargraphic’s Thomas Schnarr is clearly very happy with his company’s latest showcase.

The ‘this’ he refers to is the company’s 997 GT3 RSC, the car that Thomas and his brother Michael built to tackle this year’s Tuner Grand Prix. Having won the event with its white and blue liveried 996 GT3 RSC in 2005 and 2006, the benchmark had been set for the 997 RS’s development. The new car didn’t disappoint.

Not only did it win the event, but the lap time recorded by VLN racer Marc Basseng was nothing short of extraordinary. To put it into context, regard the following times, all recorded around the Hockenheim Ring short circuit at either the Tuner GP or during independent testing by German magazines: 996 GT3 RS, 1.11.8; 997 GT3 standard, 1.11.7, 997 GT3 RS standard 1.11.1.

Now, that 1.11 lap time is clearly about the optimum for a fast 911 road car which is precisely why it was amazing when Basseng hustled Cargraphic’s new toy around the 2.6-mile circuit in 1.08.882. To save you the maths, that’s 2.218 seconds quicker than a standard 997 RS, and that, as anyone that knows anything about racing will tell you, is an age. To put that lap time further into perspective a Carrera GT completes the same circuit in 1.08.6, and has an extra 147bhp to its name. Oh, and Cargraphic’s RSC was also on standard road tyres, not road legal track day specials, but regular Dunlop SP Sport Maxx GT rubber. No wonder Thomas and Michael are pleased.

“With the performance of the RS we are the number one, I think,” says Michael as I circle the car in Cargraphic’s workshop, slowly absorbing its incredible details. “Having good competition is very important for us, as it means you are always pushing. Our aim with this car was obviously to be quicker than our 996 RSC and also the 997 RS. We didn’t mind if we got a podium or not, as long as we beat these times. If we did this but still didn’t win then it’s because somebody else did their homework better.”

Clearly this year the boys from Cargraphic were once again the class geeks, their approach to extracting maximum performance from the RS being threefold. Firstly, get as much weight out of the car as possible, the process of which you can read more about on page 53. Secondly, it was deemed that major suspension changes could further optimise the RS’s on track ability and adjustability so Cargraphic looked into

ways to achieve this. And thirdly, there seemed like room for a bit more power to be squeezed from Porsche's motorsport proven 415bhp and 298lb ft flat-six engine.

For this latter task Cargraphic worked hand-in-hand with German engine specialist, RS Tuning, to create what can rightly be described as something rather wonderful. Capacity of the standard engine goes up 395cc to 4.0 litres thanks to new 105mm pistons, cylinders and liners, and when these changes are combined with a revised intake and new sports exhaust system the results are 465bhp at 7340rpm and 358lb ft of torque at 5500rpm. The exhaust is a Cargraphic design (although built in the UK) and retains the Sport operation of the standard RS to enable what is effectively a straight through system. At present this design is too loud for the UK at 110dB, so Cargraphic is

developing some silencers to combat this.

Just as Thomas, Michael and their team collaborated with RS Tuning for the engine built, they worked alongside Bilstein when it came to developing the car's suspension. For the 997 RSC they pulled out all the stops, equipping their black and yellow car with the system Bilstein developed for the 996 GT3 RSR. That's RSR as in the fully fledged race car, which means an infinitely adjustable setup in terms of height, camber and track, Unibal suspension joints, H&R double coil springs (main and auxiliary) and Bilstein dampers. "The only changes we had to make were to calibrate the spring rate for a road car, which means taking into account its weight and that it would be running on road tyres, and to develop different mounting points for the rear shocks, but otherwise this is full RSR specification and

build," reports Michael. "We borrowed some mechanics from the Carrera Cup and used MoTeC diagnostics to set up the suspension at Hockenheim. There was a sensor attached to each damper and the data this recorded was used to set the car up. It was very valuable to have all of this information as it led us to make some special modifications to the dampers."

Exactly what those modifications are Michael won't say. Both him and Thomas are very forthright about the car's development process but there are a couple of trade secrets that they are understandably protective over. The exact modifications to those dampers is one of them, and the other the work that has been carried out on the new piston rings, something that Thomas is particularly proud of. "We have put a lot of work into the design of the 105mm piston rings. If they aren't 100 per cent right the engine





The control centre. RSC interior is a lesson in lightweight, with thin carpet, basic door cards, no air con and new seats and runners

HE AIN'T HEAVY, HE'S MY BROTHER

Look at those door cards. They're beautiful aren't they? Their purpose may be primarily as weight saving devices (2.6kg per side), but that they also evoke memories of 993 RSs or GT2s can only be a good thing. Attached, as they are, to carbon doors proves that they're not just a homage to Porsche's past glories, but that they are present to achieve a purpose – and that purpose is lightweight.

On the face of it taking an RS on a weight loss plan might sound a bit like asking Kate Moss to cut the calories but with its RSC Cargraphic has proven there's much to be gained from a bit of meticulous trimming. Precisely how much? 107.88kg.

That's a massive difference, especially when you consider that Porsche only stripped 20kg from the GT3 when building the admittedly wider and 10 per cent stiffer RS. So how did Cargraphic do it?

Firstly, it weighed the car as standard. Porsche quotes the unladen DIN (this being the measurement set by the Deutsches Institut

für Normung, or German Institute for Standardisation) weight as 1375kg, which it says includes all fluids and a 90 per cent full fuel tank. However, when Cargraphic put its RS (air con, no sat nav or Sports Chrono), complete with a full tank of fuel on the scales it weighed 1478kg, and it's not the only overweight RS we've heard of.

The diet began by replacing the original doors with carbon items, taking the weight down from 11.6kg to 6.4kg per side, and the front wings are also now in carbon, shedding their mass from 5.98kg each to just 1.79kg. A kilo has been stripped from the rear bumper by hand drilling holes into the brackets that hold on the heatshields, while inside the car lightweight carpet saves another 10.38kg, the RS's interior now covered in just 4.5kgs worth of felt. The air con, climate control and their ancillaries have been removed to save a total of 11.31kg, and binning the original seat belts and their mountings saves another 1.1kg. Also out goes the tool kit (3.22kg), the carpet in the front bonnet (0.5kg), and various bits of lost interior

trim and the removal of the pollen filter add up to a further 7.74kg. Cargraphic's Racing wheels are said to save 3.5kg per corner, its exhaust is 7.5kg lighter than standard and a lightweight battery saves a further 5.2kg. There are also new Recaro seats and alloy seat runners that chop 3.7kgs from the weight of the old items ("If you change the seats you only save 0.1kg – all the weight is in the runners," says Michael). The rest of the weight saving comes from the deletion of parts not deemed essential for the pursuit of racing: the electric fan and its wiring (0.15kg), a selection of nuts and bolts (2.5kg), the speakers (1kg) and the side airbags (2kg), while trimming the engine and gearbox mounts saved another 5.04kg. Removing the plastic trim from the engine cover saved a further 1.2kg, and various bits of sound deadening another 6.26kg, leaving the RSC's final weight at 1370.12kg, with a full tank of fuel. It's an impressive saving, but it's got to get you wondering - just how heavy is your RS?



Weight saving measures saw the removal of standard seat belts and mounting points, while carbon fibre details are everywhere



uses more oil than petrol..." he says with a wry smile. "It was very important to get them right."

Half an hour later those piston rings are getting a thorough testing as my right foot pins the RSC's accelerator to the floor. We're back in familiar Cargraphic territory, a quiet country road that carves a path through vineyards on the outskirts of Landau. It was here that I got my introduction to the world of tuned Porsches three years ago courtesy of Cargraphic's 996 RSC, and as such it holds a bit of a special place in my heart. It's also a great stretch of tarmac for finding out about how a car handles on the road. To be driven quickly it demands hard acceleration, heavy braking, a strong front end, confidence that the rear will stay in line through a quick left-right direction change and a ride

SPECIFICATION – CARGRAPHIC 997 GT3 RSC

ENGINE

Layout: Six horizontally-opposed cylinders; water-cooled

Capacity: 4000cc

Power: 465bhp @ 7460rpm

Torque: 458lb ft @ 5500rpm

Transmission: six-speed manual, Cargraphic short shift (30 per cent shorter)

SUSPENSION

Front: RSR spec, McPherson strut, Unibal joints, Bilstein dampers, double H&R coil springs,

Rear: RSR spec, multi-link, Unibal joints, Bilstein RSR dampers, double H&R coil springs

BRAKES

Front: 350mm steel discs, six-piston callipers, Pagid racing pads

Rear: 350mm steel discs, six-piston callipers, Pagid racing pads

WHEELS

Front: 9.5x19-inch Cargraphic Racing wheel with 265/30 ZR19 Dunlop SP Sport Maxx GT tyres

Rear: 12x19-inch Cargraphic Racing wheel with 315/30 ZR19 Dunlop SP Sport Maxx GT tyres

PERFORMANCE

Max Speed: 199mph (claimed)

0-62mph: 3.9 seconds (claimed)



that can cope with tarmac that deteriorates from smooth to potholed where working tractors have crossed between the vines. The initial straight of around 400 metres is enough to build decent speed in any Porsche, let alone a 465bhp 911 weighing 1370kg. The 997 RSC sweeps through its mid-range with vigour, delivering solid thrust and dispersing into the surrounding countryside a soundtrack that is pure 911 race car. It has that same crisp edge as a regular GT3, yet it's even louder again. It's a proper onslaught on the senses, what with all the noise and the force with which you are pressed into the seat back, and feels appreciably more vivid an experience than the already sensational one offered by the standard car.

The brakes are the regular steel items, albeit

with upgraded Pagid pads, and feel absolutely up to the job in hand – it's a testament to Porsche's modern braking systems that very few of the tuners opt to upgrade them, even when they're happy to change everything else on the car.

As with any Cargraphic 911 what grabs you most about the RSC is – apart from the noise it makes at 8000rpm – the way the front end responds so quickly to even the smallest of steering inputs. In terms of razor sharpness it's a Mach III Turbo with seven blades, battery power and built in soothing balm. The inevitable side effect is a tail that is happier to move around than Porsche would ever dare engineer into a standard RS, but because of the car's wider rear track it gets away with it.

You wouldn't expect an RS to cope particularly

well when the surface below its tyres deteriorates, which perversely is one of the areas where the standard car excels, confounding your expectations with its all round ability. Truth be told the Cargraphic car copes almost as well – inevitably you get shaken about a bit over really bumpy roads but at sensible speeds the chin spoiler resists scraping the ground, and the steering, while tugging to follow cambers and imperfections, can be held on course with a moderately firm hand. And remember, that RSR suspension means that owners are able to modify the bound and rebound of the dampers (done via reservoirs located under the front hood and tucked behind the rear bumper).

Yet even in its Hockenheim setup (this car is as it left the Tuner GP) the RSC works pretty



TUNER GP: WHAT'S IT ALL ABOUT?

In Germany the Tuner Grand Prix is a big deal. Big as in 18,000 spectators, 57 cars competing, and the promise of massive sales off the back of a class victory. It is an event that has propelled the not so long ago small operation of Cargraphic into the big time thanks to three wins in the last three years.

The company competes in the GT class,

which is home to machines with the German authority's ubiquitous TÜV approval. The idea is that every car that competes in this class can be bought and used on the road. The winner is the car that puts in the fastest timed lap around Hockenheim's short circuit, and there's everything from a Fun class, to SUV, to Diesel, GT and then Open (for race machinery).



well around town; the ride is perfectly acceptable and the engine, despite its highly strung nature and ability to pull so fiercely under full power, is perfectly tractable. It will, for example, take being asked to accelerate from 15mph in fourth without flinching, so theoretically you could just keep your foot pinned and travel from 15- to 150mph in one gear. Probably not in a town though. As you can imagine, it's a phenomenal head turner too. The new rear wing and front splitter are said to add downforce but to my eye the real success is the new design of front wing. Not only are these made of carbon (you can even see the weave under the black paintwork), but they're also an inch wider than standard to accommodate 9.5-inch wide Cargraphic Racing wheels, rather than the standard 8.5-inch Porsche items.

As you can probably tell, I'm pretty smitten with this car. It impresses on so many levels from its looks, to its engine, its drivability at both low and high speeds, and its incisive handling, that it's hard to know where to begin. And Cargraphic should be commended too for getting everything through the notoriously difficult TÜV approval tests – everything on this car, from the engine build to the exhaust and the carbon doors to the suspension, has passed Germany's strict safety tests. Basseng says that the RSC's tyres, weight and power aren't in the same league as a fully fledged race car, but to me this is a good thing. For despite all the work, and despite that Tuner GP winning lap time, this tuned RS, like all RSs should, still works really well on the road. What Cargraphic has done then is to up the RS's potential on both road and track, which is no small achievement.

If tuned Porsches aren't your thing – which, for many people they're not – then this car could just change your mind. I've got a sneaking suspicion it will be the best car I drive all year ○

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despite its highly strung nature and ability to pull so fiercely under full power, the engine is perfectly tractable