

European Superpower — Driving the Seven 485R

We put Caterham's high performance model for the Continent to the test.



Let's be honest here – who hasn't fantasized about living the dreamy continental European lifestyle, of popping through an Alpine pass en-route to the coast for a rendez-vous at a seaside trattoria? OK OK, I know the reality could never live up to the cliché, but in a dream, anything goes right? For the Caterham fan however, there was always just the one fly in the ointment – the fact that you can't typically register a high performance Seven outside the UK. We island-dwellers may complain about grey weather and mediocre food, but at least we can take comfort from having "Small Series Type Approval" in our favour...

Everything changed when Caterham launched the Seven 485 however. Caterham's development arm (CTI) had been set the task of developing an extreme performance Seven which would still be able to meet EU5 regulations (and if possible, future EU6 rules too...) Mission accomplished - a prototype engine was first displayed at the Autosport Show in 2013 – and the final result was the Seven that many thought impossible, and which boasted performance statistics that many a major manufacturer would struggle to achieve. Built around the

now-familiar 2.0L Duratec engine, a raft of technologies had to be applied to be able to meet the EU regulations but without strangling the performance which had been the whole point of the exercise. The result is a car with 240PS (237 bhp), from an engine which delivers peak power at 8,500rpm, making it one of the world's highest revving EU5-compliant power plants. Its specific output of 120bhp per litre is comparable to exotica such as the Ferrari 458 Italia and again is very rare for an emissions-compliant engine, let alone one developed by a niche manufacturer.

So, why should Low Flying test drive a car which is not destined for the UK market? Putting aside the not insignificant number of Club members based outside the UK, the Seven 485 demonstrates more than any other car Caterham's ability to apply its development resources to the ever increasing regulations vehicle manufacturers need to adhere to. We have heard it said time and again that one day, Sevens risk being regulated off the road, but the 485 shows that it is possible to fight back. One key question though – can a car focussed primarily on meeting EU regulations actually be any good to drive?

I was met at Caterham's Crawley showroom by Chief Commercial Officer David Ridley, who was eager to take me to the car. However, as I entered Caterham's new workshop facilities, the 485 was up on ramps, having its fluids changed and a new set of brake pads fitted. It turns out that this car had recently returned from two days hammering around the Le Mans Bugatti circuit, being shown off (and test-driven by) well-healed potential customers, and up against competition including McLaren, Radical and Mercedes. Having evidently been driven pretty solidly at 10/10ths for two solid days, I was glad that it was being given some extra attention before I took custody.

The work complete, it fell to Alex Betts, Caterham's Press Car Technician, to give me the tour and provide the handover. As you would expect from a demonstrator car, this 485 had been finished to a high specification, with plenty of tasty carbon on show. At the same time, it was in the more pared-back, track-oriented R specification, sporting an aeroscreen and Avon ZZR tyres. The most important detail however (clearly to be expected since this was a European-spec vehicle, albeit on UK plates) was that it was a left-hand drive car, driving it on UK roads was going to be an interesting experience.



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I started off taking a tour around the vehicle, noting much that was familiar, yet with some fine detailed differences. Starting at the back, I immediately spotted the high-level brake light – perhaps slightly incongruous on a performance car, but no doubt a requirement for European registration. Next, the exhaust system, clearly an area which has received a lot of development effort to enable the car to meet emissions regulations. Upstream of the silencer, the exhaust branches in two, the twin pipes entering the silencer separately, past a vacuum-controlled valve. Further up the system, the catalytic converter is positioned close to the engine and protrudes through the side-skin.

Round the front of the car, aerofoil profile wishbones provide a suitably sporty stance, while a carbon NACA duct on the side of the bonnet feeds fresh air into the throttle bodies via an air box. Inside the cockpit, the dashboard uses Caterham's more modern layout of buttons. No toggle switch for the indicators here, replaced instead by push

buttons either side of the steering wheel. No rocker switches to be found on the dash either – instead, you repeatedly press the buttons to cycle through the various options, for example "sidelight on", "main beam on" and "lights off".

Whilst the steering wheel is the familiar MOMO leather type, regulations appear to require a different system to allow the steering column to collapse in a frontal collision. This mechanism is concealed between the wheel and the dash, meaning that the wheel is spaced slightly closer to the driver than we are typically used to. The car is fitted with leather seats and the "oh-so-desirable" carbon-fibre effect leather interior, but a surprise was the 4 point buckle harnesses in place of the full race harnesses more common on high performance models. Something tells me that European owners probably consider swapping these out once the car is registered, particularly if track work is envisaged...

There is one button on the dash however, which really commands attention. It's no bigger or brighter than any of the others,

but you still find yourself drawn to it. It is simply marked "Sport", but it might as well say "Push me..." The press release states that the Sports mode "*provides the car with even sharper driving characteristics, while enabling the vehicle to deliver its peak performance*". Fine sentiments, but the underlying reason is of course to help the car pass the emissions tests, whilst still allowing owners unrestricted performance when they feel the urge. Alex explained that the most noticeable effect of the Sport mode is on the exhaust flow, controlled by the vacuum valve by the silencer. This valve starts off closed under normal situations, forcing the exhaust gasses to travel through the full extent of the silencer; the result is a quiet, emissions compliant car. Above around 4,500 revs however, the valve opens, freeing up the gas flow and providing full performance. If the driver selects the Sport mode however, the valve remains open all the time for full performance throughout the rev range.

Sitting behind the wheel, I am briefed on the start procedure. Key in. Press Start. The

dashboard gauges swing to full deflection then settle back to their correct readings. Swipe the immobiliser fob and check for the red flashing light. Press Start again but don't touch the throttle (old habits for starting a Crossflow on carbs die hard!). There is a short pause before the engine starts to turn over, fires into life and settles down to idle, accompanied by a deep burble from the exhaust. At tick-over, you'd swear you were listening to a much larger engine than you really are, a very pleasant sound, but more akin to a 3L cruiser than to a 2L screamer.

Buckled up, the Caterham staff wish me a good trip and I am on off. It does initially feel strange sitting on the "wrong" side of the car on UK roads though... I'm just relieved that the forecast is for a dry day - I know that the Avon ZZR tyres (Caterham's current performance tyre of choice) offer amazing dry grip but have relatively limited water-clearing abilities. Being new to the car, I really didn't want to start off having to contend with a combination of wet roads, high performance and left hand drive

But whereas I had initially felt somewhat apprehensive about these first few miles, I almost instantly find myself relaxing into the drive. With the performance which I knew was on hand, I had expected the car to be challenging to drive, but nothing could be further from the truth. Relaxed, tractable, relatively quiet even, I negotiated the roundabouts of Crawley with a smile on my face.

The only aspect which did take a little getting used to were the "push button" indicator controls. Via the buttons either side of the wheel, you can set the indicators going for 25 seconds or so; a second press cancels the setting if needed before the time runs out. The system works well and the buttons fall to hand nicely, but they are rather obscured behind the steering wheel and they do have a habit of cancelling themselves just when you need them at junctions. I found myself craning my neck round the side of the wheel to check whether they were illuminated or not. It's a system which is no doubt perfectly designed for the driver coming from more mainstream sports cars, who would probably find a toggle switch anathema, but call me a luddite, this setup felt quite alien to me in a Seven.

In a narrow car live a Seven, you get over the fact that you are sitting on the "wrong" side quite quickly; I instead began to explore a little more of the performance on offer. Changing up through the ever-sweet six speed box, the biggest problem became making sure that I stuck to the variable speed limits on the M23. It wasn't just the pull of the engine which needed to be watched - some deft mental arithmetic was needed to convert from the dashboard's kph calibrations to those on display on Her Majesty's Highway.

Cruising along at a relatively steady speed, I remembered to press the Sport button. The car instantly responded with a little more urgency, the exhaust note becoming



Carbon cam cover gives the engine bay a mainstream supercar look.



Engine breathes via a carbon fibre NACA duct, while the catalytic converter is positioned close to the engine and protrudes through the sideskin.

Even with the Sport mode engaged, the engine is refined and responsive

crisper and more vocal. There's definitely more character to the engine note now too - lifting off provides an accompaniment of pops and crackles which hint at the performance higher up the rev range.

However, cruising along in the mid rev range and even with the Sport mode engaged, the engine is refined and responsive. If you want to, it's perfectly happy to potter around at low revs in top gear yet still picks up smartly when you start to wind things up a bit. To meet EU5 regulations, CTI's work on the 485's engine included electronically-actuated throttle bodies, and a revised cylinder head with different cams and compression ratio. I suspect that concerns about fuel economy rarely figure particularly highly in the Seven-buyer's mind, but with a combined fuel economy officially measured at 36.7mpg, the 485 can hold its head high against pretty much any other performance car in this regard too. But worry not, the 485 revs to 8,500rpm, so claims of improved efficiency haven't created some torque-laden tourer. With peak torque of 153lb ft being delivered at 6,300rpm, it looks like revs really will be rewarded.

But that's not for today. Arriving home, I take the chance to have a closer look over the car, at the details I hadn't been able to properly examine earlier. Lifting the bonnet reveals a beautifully engineered Caterham-branded carbon fibre engine cover which almost completely obscures the engine beneath. The effect is a "factory" look which owners of mainstream supercars would be most comfortable with - very smart. The lengths to which CTI have gone to achieve emissions compliance are further visible in the way that engine breathing is managed. No venting from breather pipes allowed here - instead the pipes from the crank case have to be routed back into the air intake so that the engine can burn its own combustion gasses.

A smaller detail, but a surprise none the less was the location of the washer-bottle (which had clearly been left fitted despite this car being set up with an aeroscreen at present). With space under the bonnet at a premium (and the only obvious gap available being under the primaries, and clearly far from ideal), it instead resides in the boot, a surprisingly practical option compared with the alternative of having it tucked away in some hard-to-reach recess of the engine bay.



Even in the sportier R finish, the 485 is a comfortable place to be. Right: The Sport button demands to be pressed.



The following day dawned dry and bright. I felt that I had got to know the car a bit (my notebook included *“an easy to drive, beautifully set up car with a peachy engine”*) but I had intentionally not explored too much of the performance on offer. Today, however, I was going to enjoy the rev range to the full.

So – buckle up. Press Start button. Unset Immobiliser. Press Start button again. Select Sport mode (it would be rude not to) and off we go.

Around the Buckinghamshire lanes, as the engine oil began to warm, I picked up the pace. At low to mid revs, I am again struck by just what a tractable engine this is, happy to respond to requests for power from pretty much any speed you care to try. With the exhaust valve now locked open, there’s just enough popping and banging on the overrun to entertain, but it’s a deeper and more “grown up” sound than that of, say, a 140 Sigma Supersport with its pea-shooter exhaust.

Finally, I get the chance to open her up fully. The first few times I shoot through the gears with all the shift lights illuminated, I think I may have uttered a few blasphemous profanities. Jeez it’s fast. The stats may show that its peak power is down by some 26bhp compared to a Duratec R500, but I’m willing to bet that under most conditions, the 485’s

wider power band would make it the quicker car. It’s utterly bonkers quick, yet the engine has none of the peaky characteristics you would expect from what is still a relatively small capacity and naturally aspirated engine.

I picked up a friend to offer him a ride; as an ex-Caterham owner and ex-racer but serial superbike hoarder, I was interested in his opinion of the performance. Without wanting to incriminate myself too much, we headed for the road known by local bikers as “The Flying Mile” (the name should tell you all you need to know). With clear tarmac and good visibility, the quoted 0-62mph of 3.4 seconds felt perfectly realistic as we launched off down the road, from where the car just kept on pulling. “Superbike quick” came the simple verdict from the passenger seat.

The last car I road tested from Caterham was the little Suzuki-powered 160. Tactile and delicate, driving it was all about conservation of momentum. Forget that in the 485R – here you find yourself barrelling into corners, braking hard and late, then dropping a cog or two to fire out the other side. It’s like a sledgehammer, it’s utterly bonkers and at the same time utterly intoxicating. I don’t think I even need to pass comment on the fantastic handling and steering, other than to recognise that Caterham seems to have set the bar even higher in these regards with the

new models it has released over the past two to three years.

So, the 485R is a beautifully engineered, seriously quick Seven, which just happens to have been engineered to push back the boundaries where Caterham can supply seriously fast cars. Certainly mission accomplished in this regard, but equally impressive is the totally different persona which the car takes on when the desire for an adrenaline rush wears off. In most other small-capacity performance cars I have ever driven (R500 included) there is a cost to the ultimate performance on tap, in the form of peaky power delivery and an engine which only really comes on song at the higher end of the rev range. The 485’s engine seems to have pulled off that magic trick of offering the best of both worlds - docile and relaxed when you want to cruise around, yet with extreme performance available at will.

Before this test drive, I had certainly hoped that I would enjoy my time with the 485, but I’d had a nagging doubt that any vehicle designed primarily around a set of regulations would lack that magic spark. How wrong I was. I absolutely love this car - in fact I would go so far as to say that it’s the best Seven I have ever driven. So, I think I’m back to that dream. Yes, I’ll take a 485R please, oh, and that European lifestyle to go with it... *LF*