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First Class

Ben Linney imported the first Nissan R35 GT-R into the country – he's since switched to a UK-spec version, and it's already been fitted with a wealth of tuning and styling goodies

‘I have owned lots of Skylines – R32s, 33s and 34s – and they have all been modified because that’s my business’

GTC Racing Technology was established seven years ago and its cars are no strangers to the pages of *Japanese Performance*. It comes as no great surprise that GTC's main man, Ben Linney, is already one of the front runners when it comes to tuning and styling Nissan's new wonder car – the R35 GT-R.

‘I've owned lots of Skylines – 32s, 33s and 34s – and they have all been modified because that's my business,’ explains Ben. ‘I actually imported the first R35 GT-R into the UK.’ He must have put his name on the waiting list at birth then? ‘Not really, I'm just very well connected with Nissan. That was a JDM car at the start of 2008, but I now have a European model which I bought in April last year.’

The main idea behind this demo car was to produce a car which was fast and reliable, but with the majority of the parts made in the UK. ‘At the moment, the exchange rate with Japan is very bad, which makes it very expensive to buy Japanese tuning brands, so we wanted a UK supplier – that's why we went to Forge Motorsport,’ Ben points out.

Forge had been working with the car for about five months in total and Ben didn't even get to see it when it made its public debut at the Autosport Show in January. ‘I was away mapping cars in Asia at the time,’ he admits. ‘I was away for over a month.’

The partnership with Forge was very much a two-way street. ‘We were in contact on a daily basis about the parts which were being developed – there were a lot of emails between us. We do the mapping side of things while Forge are responsible for the hardware, so there was a lot of interaction.’ GTC were also responsible for the carbon-fibre additions to the bodywork.

Forge's R&D Manager is Chris Lloyd and he takes up the story: ‘We knew the areas we'd be looking at before we even got the car because Forge are well known for their intercoolers, dump valves and actuators.’ However, the first problem was to actually get to the intercooler. ‘It's an aerodynamic car with a flat undertray, so there's a lot of bolts to undo there,’ remembers Chris. ‘And then there's the bumper, which is a load more bolts and about 40 clips.’ Of course, he's a lot quicker taking the front off the car now as he's worked out the shortcuts.

The standard intercooler is two vented cores – one fed to each turbo. The Forge upgrade is an all-in-one unit which is twice the capacity of the standard items and runs horizontally. The OEM coolers are fitted with plastic ducting/foam edges to ensure they make an air-tight seal with the front bumper so all the air is fed directly into them – Forge have improved on this arrangement with their version. The original pipework is cast iron, so quite heavy, and that has been replaced with Forge aluminium pipes and silicon hoses, which Chris says are more efficient and actually weigh 1kg less. On this demo car it resulted in an extra 12bhp and impressive torque improvements. ‘We got about 40lb ft more at the bottom of the rev band and then again from about 5,500rpm up to the red line,’ Chris is happy to confirm. The intercooler costs £1800 (+VAT), the hose kit a further £119, with £306.24 for a pair of the turbo actuators. The cheapest part from Forge is

Right from top: GTC carbon-fibre additions are works of art; GTC's exhaust and remap alone nets 100bhp; engine bay looks show-quality with Forge additions – power will soon be touching 750bhp

the solid alloy oil filler cap at £54.74.

The standard dump valves have been replaced with Forge aluminium pistons rather than rubber versions. These also use variable spring rates to match increases in boost pressure, while their actuators replace the rubber diaphragm (which goes soft when it heats up) with a Kevlar compound which holds the boost a lot more reliably at higher rpm. And of course all the Forge products come with a lifetime warranty.

On the standard car the water level is hard to read in the header tank, as the team at Forge discovered: 'The only way we could check it was to open the cap, point a torch in and shake the car,' reveals Chris with a grin. The new alloy header tank which they designed is a much better solution: not only does it increase the capacity of the water system by two litres (and more water equals more effective cooling) but it also incorporates a sight glass in the side of the pressurised tank – very handy.

Attention has also been turned to a known R35 weak link which rears its ugly head on trackdays, as Chris explains: 'If the oil in the transmission gets above 130°C, that can be terminal. Even if it gets above 120, you should change all the fluids, which gets expensive. With normal road driving it shouldn't get above 90.' As Ben had plans for the car on the track and drag strip, precautions had to be taken. The car is now fitted with an alloy finned sump, which seems to work well by itself, but that's linked into a 25-row Mocal oil cooler which is located just behind the front bumper. It's a tight squeeze, but that's where it gets a constant flow of cold air. The system is thermostatically-controlled and activates at 97°C – so far this year the car hasn't reached anywhere near that temperature. This upgrade involves removing the bumper, so Chris suggests fitting the intercooler and oil cooler at the same time rather than having to remove the bumper each time. While Chris and Ben admit that parts for the R35 are going to stay as a niche market – there are only 10,000 and just 900 in the UK, Ben points out that the US market is about a year ahead of Europe and it's taking off there in a big way.

GTC are Cobb's European tuning agent and they worked with them to develop software upgrades, first with their JDM car, and later with the EDM version. Between them they were at the front of the queue when it came to cracking the R35's challenging ECU.

'The R35 is a fantastic car straight out of the box: Nissan have really raised the game, although there are a couple of limitations,' said Ben. 'But with just a re-map and a de-cat exhaust you can gain another 100bhp at the wheels. We have now mapped 220 cars all around the world

and had that result for all of them.'

At the moment, this car is the UK's fastest R35 on the drag strip. 'It did a 10.8sec run at Santa Pod last year when it was about 580bhp, before all the modifications were carried out,' is Ben's proud claim. His closest UK rivals are in the 11s, while in the USA they have cars running in the mid-10s, but the USA has had more time to work on the cars, and that's running them with more power.

Plans in the pipeline for the GTC R35 include bigger turbos and injectors; the standard 550cc versions tend to max out, so Ben's working with larger 800s and 950s, although he confessed there were some teething problems using the larger injectors to start with.

Later this year Ben and his car will be heading back to the drag strip with around 750bhp to confirm exactly what all the modifications have added up to. 'A low 10 would be nice, or maybe even a dip into the 9s.' And you can bet Ben and the folks at Forge are the people to do it. ●

SPecification

Ben Linney's Nissan GT-R

Engine	2009 Nissan R35 GT-R, 3.8 V6 twin turbo, UK-spec Forge Motorsport front-mounted intercooler, carbon airboxes, silicon boost hoses, silicon coolant hoses, turbo actuators, type RS dump valves, finned transmission sump, transmission cooler, header tank, oil cap. GTC 90mm titanium exhaust Y-pipe, 90 mm cat-back titanium exhaust system, down-pipes, carbon-fibre engine covers, Cobb remap – 600 bhp
Transmission	Standard
Suspension	Standard with Whiteline anti-roll bars
Brakes	Standard Brembo discs/callipers
Wheels & tyres	20in Enkei GTC01 wheels, Cooper tyres
Interior	Standard
Exterior	GTC carbon-fibre sideskirts, carbon-fibre bootlid, carbon-fibre rear spoiler, lower front splitter

20in Enkei rims with Cooper rubber set the car apart along with graphics. Underneath hides Whiteline anti-roll bars, but brakes remain the excellent OE items