

Forge

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There's nothin' I can't do with a race car

So, here we are again. *There's nothin I can't do with a race car – part three.* Sit down, buckle up and get reading, we've got a lot to go through.

In fact, we've got so much to go through that, rather than kicking things off with some big, long-winded introduction to the build again, I'm just going to recap the basics for anyone out there who missed the last two issues and, as such, missed parts one and two of TNICDWARC (wow, how's that for an acronym?) The car: my Mk5 GTI. The plan: to improve every area of performance possible with the help of tuning legend, Regal Autosport. Did I mention I'm not quite sure how I got this far in the first place?

Forge Twintercooler

I think it's safe to assume that if you have been reading *PW* for a while now, you'll have a pretty good idea of what intercoolers do on turbocharged cars. Put simply, an intercooler's job is to cool the air as it passes between the turbo and the engine. When the turbocharger compresses the air, it condenses it and, when compressed, air heats up. And as we all know, hot air isn't the best thing for efficient combustion.

It's the reason your car might feel a little

slower on scorching hot days and why people always talk about cars performing better on colder days. So, by cooling the air back down after it leaves the turbo, it becomes denser, meaning you can get more of it into a set space. The result of this is that more air can go in to the cylinder at each piston cycle and, when mixed with the correct amount of fuel, will yield more power. I know, it's probably quite clear by now that I didn't pay much attention in my physics lessons at school but,

well, those are the basics. So with that in mind, it stands to reason that the more efficiently your intercooler setup performs, the more efficiently your engine can work. After all, as with most things, an engine is only as strong as the weakest link in the chain. It doesn't matter if you've got the biggest turbo in the world bolted on out back, if it's pumping boiling hot air into the combustion process, at best it won't work too well and, at worst, it won't last long at all.



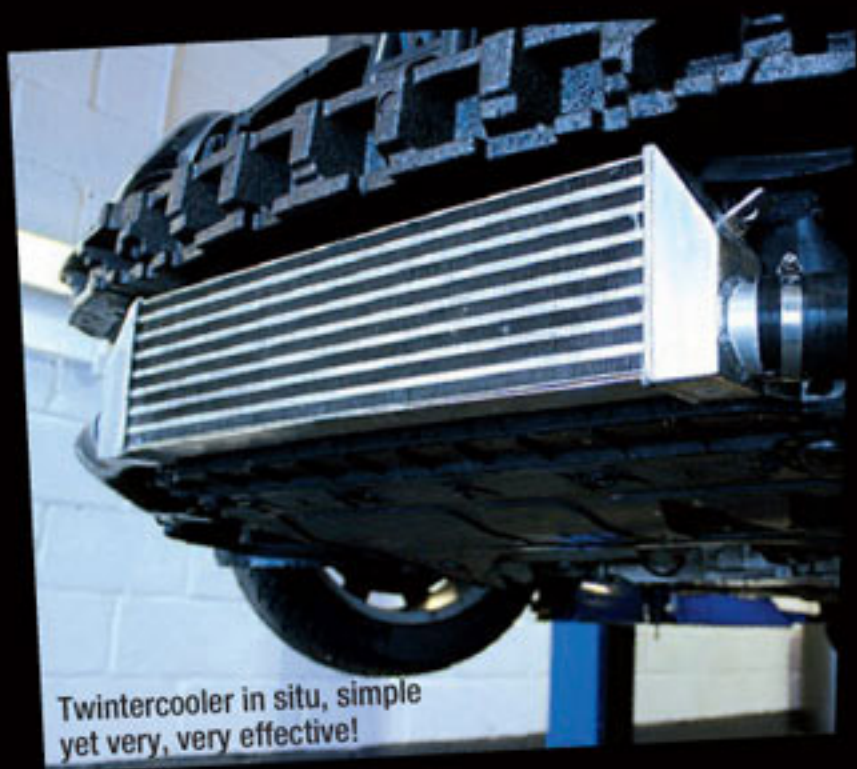
Not good, I'm sure you'll agree. Which is why, when considering any kind of performance mods to your turbocharged engine – from a simple remap to the kind of spec I'm dealing with here – fitting an intercooler is not just a good idea, it's absolutely vital.

And I don't know about you but for me when it comes to intercoolers, Forge Motorsport is the first name that springs to mind. But this isn't just an intercooler, it's a

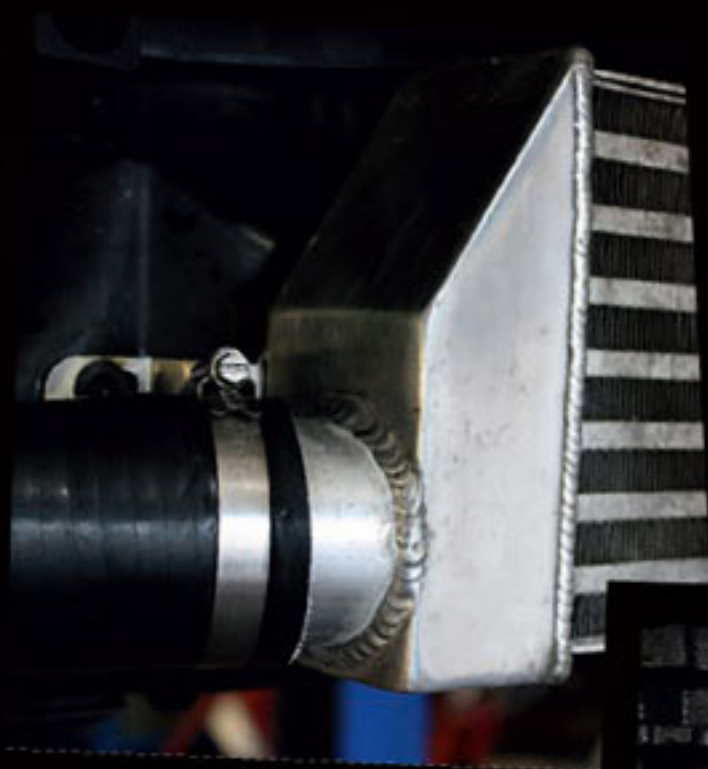
Twintercooler. Yep, that's right, a Twintercooler. No, it's not a misspelling on our part, that's what it's called. And for a good reason too. You see, most intercooler setups have one core, which is all very well and good but the clever chaps at Forge don't just stick with well and good. No, you don't become one of the leading tuning brands in the world by sticking with the status quo. You see, Forge's Twintercooler uses a twin-core design, hence the name.

This means that it is far more efficient at cooling the air passing through it which, in turn, means that the engine can work even more efficiently than with a standard, single-core setup. In fact, in testing Forge found that the twin-core design saw greater efficiency throughout the rev range from top to bottom, while the specially designed end tanks saw increased flow rate through the 'cooler. And by pairing the Twintercooler with the standard, factory intercooler, Forge

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Twintercooler in situ, simple yet very, very effective!



Black Forge hoses chosen to keep things stealthy up front, just the way we like it

"In testing Forge found that the twin-core design saw greater efficiency throughout the rev range from top to bottom, while specially designed end tanks saw increased flow rate"



not only saw an increase in power and torque but a huge reduction in inlet temperature up to 20 degrees Fahrenheit, from 102 to 82 at 6600rpm on a standard car, but increased flow efficiency too. You'd be forgiven for thinking that with all that going on, fitting it to the car would be a nightmare involving cutting bumpers, fabricating brackets and general headaches;

but as is always the case with Forge products, things couldn't have gone smoother. Designed to be a true, bolt-on kit, fitting the Twintercooler is about as simple a job as they come. And with all the relevant hoses and mounting hardware supplied in the box, hooking it up was about as drama-free as you can get. And as I spec'd my Twintercooler to come

without any Forge branding on the front and with black hoses, it really is a stealthy-looking bit of kit. But, of course, it can't just look the part, it's got to do the job too. And well, it goes without saying that it does this just perfectly. Without going all Ronseal on you, the Forge Twintercooler does exactly what it says on the tin and really, what more could you ask for than that?

