

BEFORE STARTING...

Get the right tools for the job. If you've taken your car apart, you can't drive down to Halfords to buy what you need, can you?

Know what you're doing and leave it to the experts if you're not up to it. If you get into trouble, don't call us for help because you don't know how to rebuild your ABS unit or reprogram your EEC-V module...

Intercooling



Fitting a big intercooler only takes a couple of hours, gives your drill a rest and will easily boost power and torque.

An intercooler, to all intents and purposes is little more than a radiator. It not only looks like one, but its function is basically the same. There are two crucial differences however: the first is that the radiator cools the coolant within the cooling system, while an intercooler reduces the temperature of the charge air already compressed by the turbo and yet to be fed through the throttle body.

The second and most important difference, is that big power gains can be achieved simply by increasing the volume of an intercooler. The reason for this is based on the simple principle that more fuel mixture means more power. With the aid of powerful pumps and big injectors, almost infinite amounts of petrol can be forced into a combustion chamber. With air, it's not so simple.

When the temperature of air is reduced it decreases in size. Obviously the smaller something is, the more of it can be fitted through a limited space like a throttle body or inlet manifold. To burn efficiently, plenty of fuel needs plenty of air, which an intercooler can provide.

Eric Willetts of the Black Country RSOC and his immaculate Moonstone three-door Sierra Cosworth, kindly volunteered for an experiment to see what's involved in fitting a Pace 500 intercooler. Mick at Hi-Tech was on hand for comparative before and after power runs. A rolling road of course isn't necessary but we wanted to know exactly what difference this modification would make.

A couple of easy runs showed that with the standard intercooler, the Sierra was producing 314 bhp and 260 lbf.ft of torque at 6530 rpm. See how we improved this with a couple of hours spannering.



I am Wrath The Protector, Lord of the YB.