

Remapping Technical Info

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Engine Remapping

What is the Remap Service?

The engine remap service that we offer here at Celtic Tuning uses the very latest technology which utilises the on board diagnostic port,

also known as an OBD port. If your ECU is too old and not able to be remapped via OBD then we also have the skills to be able to chip tune

your ECU giving the same results.

With the use of an external managing unit such as ours, it is possible to take the manufacturers map off your vehicle, to which it will be

stored, and overwrite a performance map in its place. There is no need for removing or opening of the ECU as it is all carried out through

the manufacturers OBD port which makes the procedure safe and does not invalidate your warranty. Another major benefit to custom OBD

remapping is that we can take into account any modifications and tune your vehicle over and over again with relative ease until we have the

desired results.

The basics of our remap technology changes your engines variables in order to provide you with more torque and brake horse power throughout

the engines rev range, making the car faster, more refined and more fun.

So, what is Brake Horse Power?

The term horse power originated with James Watt, who determined by experiment that a horse could do 33,000 foot-pounds of work a minute in

drawing coal from a coal pit. To this day it remains the automotive industries standard measurement of power output, hence Horse Power.

So, what is Torque?

Increase your Torque

Torque is a force that tends to rotate or turn things. Torque is usually measured in English units such as pound-feet (lb-ft); although the

international standard is the Newton-meter (1 lb-ft is equal to 1.356 Nm). In a car, the engine converts the horsepower it

generates into

torque by turning the crank shaft. The combustion of gas in the cylinder creates pressure against the piston. That pressure creates a force

on the piston, which pushes it down. The force is transmitted from the piston to the connecting rod, and from the connecting rod into the

crankshaft.

Torque is what provides you with acceleration, it is the force applied to the drive shafts in order to turn your cars wheels. The more torque you have the faster the wheels will turn and therefore

accelerate. If you were to double the torque of your engine it wouldn't however halve your 0-60 time, although will dramatically reduce it.

If the power gains we can make are so great, why don't cars come from the factory with maximum power output?

When a manufacturer designs a car, it needs to take into account all factors that will affect the running and reliability of their vehicle.

As most cars are sold all over the world, they have to contend with these varying factors:

- Temperature and humidity variations from equatorial to arctic regions.
- Varying fuel qualities.
- Varying Government emission regulation controls. Cars are designed to cater for all target users from the young to the elderly.

As a result of this, manufacturers detune their vehicles to enable them to sell a standardised vehicle that is suitable for all of their

target markets. Here in the United Kingdom we don't suffer from extremes of weather conditions and we have good quality fuels and operating

conditions, this enables us to raise the output parameters of the engine safely and allow the engine to show its true potential.