



PERFORMANCE  
REMAP  
SPECIALISTS

SMOOTHER  
MORE  
RESPONSIVE

# MILES

THANK YOU FOR YOUR INTEREST IN CELTIC TUNING. OUR NETWORK IS GLOBAL AND WELL-ESTABLISHED, BASED SOLIDLY ON OUR PEOPLE'S EXPERTISE, OUR TECHNOLOGY'S EFFICIENCY AND OUR LONG EXPERIENCE.

We know that wild claims and half-truths are rife in this business, but not here. We promise only what we can deliver, and what we deliver is measurable, tested and effective software. There's a lot to take in; if anything is unclear, our staff will be happy to talk it through with you.

## 01

### KNOWLEDGE AND EXPERIENCE

We are leaders in **Electronic Engine Enhancements**, with a global dealer network and major franchises as far afield as Russia, South Africa, China, USA, Australia, to name just a few. Our name is one of the best known and longest lasting in the tuning industry; our knowledge and experience leave the competition miles behind.

## 02

### UNPARALLELED SOFTWARE

Few tuning companies genuinely write and **develop all their software in-house**, using state-of-the-art facilities, but we do. All our directors are degree-educated developers and, unlike in most other companies, all our development is done using manufacturer development data 'Damos', not inaccurate third party description files. **This gives us unparalleled ability to provide the most accurate tuning.**

## 03

### TRIED AND TESTED

At our HQ, we have **two state-of-the-art 4WD dyno test cells** which we use to develop all our management software and to provide evidence of the performance gains we achieve. We welcome conversations and explanations with all potential customers; whatever we can do to help inform and reassure you, we will.

# APART

# HISTORY

## OF REMAPPING

### 1980'S >

In the early 1980s, the introduction of electronic fuel injection changed the automotive industry forever. The move from traditional carburetors to the electronic control of fuel injection began a new era of modern engines and, as part of that, of modern engine-tuning techniques.

The basic principle is that electronic components look to the ECU for data tables, which instruct them to operate in a certain manner, whether pressure or duration, etc. Until the late 1990s, 'chip tuning' was the only way to tune these engines: this meant physically removing the 'chip' from the ECU so its parameters could be modified and flashed into a new chip.

### THE LATE 1990'S >

This was when the European On-Board Diagnostics system (EOBD) was introduced, giving manufacturers the ability to provide software updates via the diagnostic socket. This gave rise to the term 'Remapping'. In principle, this was the same process as 'chip tuning' – in other words, the chip's software parameters are modified – but now there was no need to open up the ECU.

### 2007 >

The manufacturers decided to invest in 'Tuner Protection' (TPROT) technologies which, on most modern vehicles, prevented the ability to tune via OBD. This demanded a new set of tools to tune the ECU outside of the vehicle, and a new level of skills to use them. Some vehicles are still OBD, but a lot require removal...





# PERFORMANCE UNLEASHED



## OUR PERFORMANCE FIGURES SPEAK FOR THEMSELVES

Unfortunately, software is a non-tangible product, which makes a genuine comparison difficult. So when looking for a company to provide you with software, most will solely look at the performance data on offer and compare accordingly.

**Our performance figures are more impressive than most, if not all, of our competition.** The reason for this is simply the depth and breadth of our knowledge, along with our development programs.

Other tuning companies may try to dismiss our figures as either over-stated or too much for a vehicle.

## OUR STANDPOINT IS:

- **Our tuning works because we've developed it ourselves and we have the expertise to use it properly.**
- **Our software is backed up by dynamometer charts which show before and after gains and so give clear indications of our performance offerings.**
- **Our competence and professionalism are underwritten by an insurance-backed mechanical warranty; this is a practical way to demonstrate the confidence we have in our people and technology.**

## BMW i8 (I12) 1.5 Turbo Hybrid 1499 cc (2014>) 357 bhp

EXCELLENT JOB DONE WITH THE CAR IT RAN A HIGHER FIGURE THAN STOCK FIGURE QUOTED ON ITS FIRST RUN BUT INCREASED TO AN AMAZING 408BHP, I NEED TO GPS VERIFY THE 0-60 TIME FROM LAUNCH BUT IT SHOULD BE AROUND 3.6 SECONDS BASED ON SIMILAR VEHICLES WHICH IS GREAT. ALSO INCREASED MY MPG FIGURES BY AT LEAST 10% EXCELLENT PROFESSIONAL SERVICE HIGHLY RECOMMENDED — Piers, Hampshire

## WHAT MAKES OUR SOFTWARE DIFFERENT?

Modern management systems provide a finite level of control; this is a great advantage for tuning but can also be detrimental if not fully understood.

We develop all of our software with mechanical empathy and drivability as our major focus. Any 'tuner' can add fuel/boost to provide a power gain, but modern management systems have a myriad of limiters and control measures which have to be fully understood to ensure there is no detrimental impact on engine components.

## FACTS ABOUT SOFTWARE:

### More power is not more strain on components

An engine producing 20bhp less at peak may have no control over the ramp rate of the torque curve at low RPMs, which can shorten the life-span of the clutch/flywheel and can also cause spikes in boost, leading to premature wear/failure.

### Poor software can lead to mechanical failures

Regardless of power output, software which is incorrectly calibrated can cause diesel engines to run rich which can in turn cause premature DPF failure. Likewise, software can cause a petrol engine to run lean, which can lead to melted pistons and engine failure.

### All software is not equal

Complex software recalibrations affect how the engine is controlled and is a technical process which isn't easily understood by an untrained eye, this makes it difficult for the customer to make direct comparisons. This is why, for your own peace of mind, you need to choose a tuner with the highest possible levels of knowledge and understanding. It's like saying a car is just a car when you're comparing a Ferrari with a Ford.

**Our 4WD dynamometer test cells are primarily here for software development. All vehicles go through our development program to ensure maximum accuracy and are tested for the following:**

- Air/Fuel ratios to ensure perfect engine operation at all RPMs.
- Boost delivery to ensure no over boost conditions or spikes in delivery.
- Exhaust gas temperatures to ensure no engine runs too hot.
- Where applicable, engines are logged for advance curves ensuring no detonation.



**ALL VEHICLES ARE ALSO EXTENSIVELY ROAD TESTED TO ENSURE NO TRANSMISSION VIBRATIONS, CLUTCH SLIP, HESITATIONS AND FOR GENERAL ALL ROUND DRIVEABILITY.**

# TRUST

## SMALL WORD, HUGE IMPORTANCE.

When you take your vehicle to a Celtic Tuning Authorised Dealer, you can be completely confident that – like all of our global network in more than 20 countries – this dealer was chosen for its ability to pass on to you our rigorous quality of service. Our name depends on the job it does, so when we choose, we choose carefully.

# 01

## THE SERVICE YOU CAN EXPECT

We tune all kinds of engines with equal care and attention to detail: cars, vans, 4x4s and trucks, of course, but also tractors and agricultural vehicles, marine engines, track and race cars, as well as Direct Shift Gear (DSG) gearbox engines.

# 02

## WE KNOW IT, WE DEVELOPED IT

We never buy in software and just try to make it work in any and every situation. We develop our own software. We have two four-wheel drive (4WD) dyno cells with linkage systems, which is unusual and shows our commitment to thoroughness. It effectively means we're able to accurately test all modern vehicles and to keep up to speed with how they actually develop and function.

# 03

## CONSTANT REFINEMENT

When a dealer joins us, we buy in to them and they buy in to us. Their commitment to match our high standards is equalled by our commitment to keep them trained and up-to-date. So there's no unpredictability and no rogue or semi-detached dealers. Wherever you are, you can be sure of the same high-calibre service.

# YOUR+OPTIONS

Dependent on exactly which make and model you drive, we offer a variety of options. Different engines have different potentials and limitations that allows us to tune them in different ways with different outcomes. Added to which, of course, is personal preference. Drivers demand different things from their cars, so if there's a specific result you'd like

to see, do tell us and we'll let you know if it's achievable or not. Our development programmes are continually evolving so therefore the options below are examples of some solutions, for the current up-to-date list, please visit our website.



EGR

### EGR DELETE

We can blank or remove the Exhaust Gas Recirculation (EGR) valve without the limp mode error fault being triggered. This can help eliminate recurrent problems arising from a problematic EGR valve.



DPF

### DPF DELETE

We can remove Diesel Particulate Filters (DPF) from any vehicle, but – in line with UK and European regulations – that vehicle can then only be used off-road.



### VMAX REMOVAL

Taking out the vehicle's maximum speed limiter means the car's free to achieve its engine's fullest potential.



### REV LIMITER REMOVAL

We can improve an engine's throttle response – and therefore the car's on-road performance – by increasing the rev limiter. It means, effectively, that with each change-up of gears the revs will be higher.



### O2 DELETE

The O2 sensor is the key sensor in the engine fuel control feedback loop and controls the volume of oxygen in the exhaust gases and fuel mixture. Once deleted, de-cat pipes can safely be installed.



### LAUNCH CONTROL

Where this is not already installed, we can install it; it's an electronic system which aids acceleration from a standing start.



# THE DIFFERENCE



## RELAX

We're completely confident in the software we write and the professionalism of all our dealers. So confident, in fact, that we back it up with practical reassurance.

Once we've worked on your engine you will notice a marked **increase in power output**. We're not in the business of making claims which performance can't back up, and engines will vary widely in the improvements they show, **but on average you could expect something in the region of 45% more power**.

Specifically, you'll see a **sharper throttle response**, **smoother power delivery** and **improved power** for safer over-taking, as well as (for turbo diesels) **better fuel economy**. Overall, of course, you'll notice your car is a lot **more enjoyable to drive**.

## SPECIFICALLY, WE OFFER:

- A supplementary insurance-backed mechanical breakdown warranty
- A 14-day money back guarantee if not completely satisfied (a fitting fee may apply at certain locations. Your statutory rights are not affected)
- A lifetime guarantee for your Celtic Tuning software
- **Our mechanical breakdown warranty is valid for the shortest out of:**

12 months from the date of installation of the Celtic Tuning product by a Celtic Tuning Approved Installer;

30,000 miles as measured on the motor vehicle's odometer from the date of installation of the Celtic Tuning product by a Celtic Tuning Approved Installer (or by the Customer using an eMotion device);

The period remaining on the original warranty provided by the Manufacturer of the Motor Vehicle at the time of purchase from new.

For more information:

[www.celtictuning.co.uk/guarantee-warranty](http://www.celtictuning.co.uk/guarantee-warranty)





# THE BEST

### BMW X5 (F15) xDrive M50d 2993 cc (2013>) 375 bhp

I HAD A GREATEST PLEASURE OF WELCOMING KEVIN FOR A THIRD RETUNE IN OUR HOUSEHOLD. PREVIOUS BEING MERCEDES GLE450 COUPE, BMW X6 40D(F16) AND NOW THIS X5 M50D(F15).

ALL VEHICLE'S PERFORMANCE HAS BEEN TRANSFORMED FROM GREAT TO SIMPLY AMAZING! THE GUYS WERE TOTAL PROS, THE CUSTOMER SUPPORT HAS BEEN OUTSTANDING - I WILL ONLY USE CELTIC TUNING FOR ANY MODIFICATIONS TO MY VEHICLES.

— Konstantine, Surrey

### Audi S3 (8V) 2.0 TFSI 1984 cc (2012>) 295 bhp

VERY IMPRESSED WITH THE PROFESSIONAL 1 TO 1 SERVICE THAT I RECEIVED. MY CARS PERFORMANCE/ DELIVERY HAS IMPROVED WITH THE ADDED BHP AND TORQUE! AND NOT TO FORGET THE BONUS OF AN EXTRA FEW MPG WHEN I DRIVE ECONOMICALLY!!

— Matt, Southampton

### Maserati Ghibli 3.0 V6 2987 cc (2013>) 275 bhp

COLLECTED THE MASERATI YESTERDAY FROM CELTIC TUNING, HUGE DIFFERENCE. BETTER THROTTLE RESPONSE, IT FEELS IT HAS A 10% INCREASE IN PERFORMANCE WITH A DEFINITE 10% EXTRA MPG. IT'S A BRAND NEW CAR, BUT THIS IS HOW IT SHOULD HAVE BEEN WHEN DELIVERED FROM MASERATI!

— Juan, Plymouth.



REMEMBER: NONE OF IT BAFFLES US. WE DEVELOPED IT OURSELVES. IT'S AN EASY CLAIM THAT MANY MAKE, BUT ONE WE CAN PROVE.

# 01

YEARS IN THE BUSINESS,  
MILES ON THE CLOCK

It's hard to become a Celtic Tuning Dealer, and it should be. That's your reassurance that wherever you go, you'll get the best possible service.

# 02

HIGH POWER,  
LOW RISK

Our industry leading performance figures are backed by reassuringly comprehensive – and comprehensively reassuring – aftercare and warranty.

# 03

FUTURE-PROOFING

This industry doesn't stand still for long. We're committed to being the first to understand and implement changes, and to pass on what we know to our growing global network.

# SOFTWARE

## WHAT NEXT?

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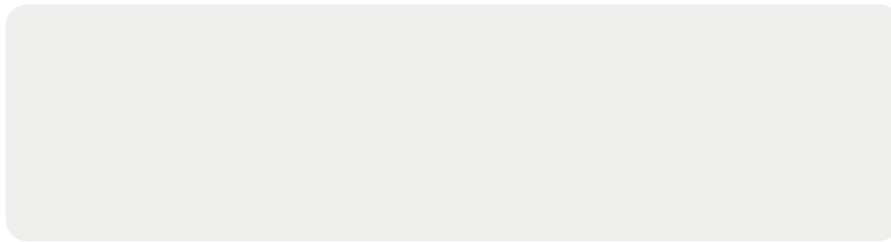
We're happy to discuss any of what's in here, so you're very welcome to get in touch in whatever way suits you. And don't forget there's plenty more information, as well as a way to see how our expertise could transform your car's performance, on our website.

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T: **0333 6000 669**  
INT: **+44(0)1637 875 209**  
**enquiries@celtictuning.co.uk**  
**www.celtictuning.co.uk**

**Unit 3a**  
**Quintdown Business Park**  
**Newquay, Cornwall**  
**TR8 4DS, UK**

Your nearest authorised dealer is:



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