Honda Civic 2.2 i-CTDi 138bhp - Stage 3

In 2004, after realisation of high European demand, Honda embarked on releasing their very first diesel engine. A name known to most for the invention of the legendary V-Tec and with a distinct dislike of diesel engines, Kenichi Nagahiro – Executive Chief Engineer of Honda R&D, was commissioned with the task. In a market with fierce and well established European competition, Nagahiro had a tall order to produce a competitive diesel engine with class leading refinement and no previous diesel engine experience.

Nagahiro didn't just build a good diesel engine, he in fact managed to produce one of the most refined diesel engines on the market today, with power and economy levels up with the class leaders. The one key difference that Nagahiro adopted was to lower the compression to 16.7:1 as opposed to the competitor's average of 20:1. What this equated to was quieter and smoother low load running which provided great improvements in refinement. Where a reduction in compression usually leads to a loss in torque, Nagahiro overcome this with the addition of a Garrett Variable Nozzle Turbine which allows for quick response and torque when needed. Alongside this, the i-CTDi also incorporates twin balance shafts, dual mass flywheel, Exhaust Gas Recirculation (EGR) and Common-Rail 2 fuel injection with pressures up to 1600bar to make it one of the most refined diesel engines on the market.

The i-CTDi therefore makes for a very good base for tuning and as such we have developed 3 stages of tuning to cater for all requirements. This review is for Stage 3, the ultimate performance upgrade for the i-CTDi which takes it from 138bhp up to 228bhp and from 251lbft up to 336lbft torque. This software upgrade is designed to be used with uprated clutch, uprated turbo and performance panel filter which ensures prolonged longevity of components.

As you can see from the chart below, the performance times are blistering and actually on par with the widely acclaimed Civic Type R. With the 0-60 time being reduced by 2.8 seconds and the 0-100 time being reduced by a massive 10.0 seconds, it makes for an extremely quick point to point car. The in gear acceleration haves to be experienced to be believed and the grunt when accelerating out of corners makes the real world driving even quicker than these figures suggest. The reports back for fuel economy were suggesting 3-4mpg improvement and on a long run 58mpg was achieved, no loss of economy from Stage 1 or 2.

This software upgrade is available on the entire i-CTDi range which includes the Civic, Accord, CRV and FRV. This is considered our Stage 3 upgrade which is the ultimate performance package.

Speed in MPH	0-30	0-40	0-50	0-60	0-70	0-80	0-90	0-100
Original time in secs	3.4	5.1	7.0	9.6	12.0	15.8	19.8	26.2
Stage 1 time in secs	2.8	3.9	5.3	6.8	8.3	10.6	13.0	16.2
Improvement (s) in secs	-0.6	-1.2	-1.7	-2.8	-3.7	-5.2	-6.8	-10.0

DASTEK DYNAMOMETERS

Celtic Tuning
DYNAMOMETER REPORT

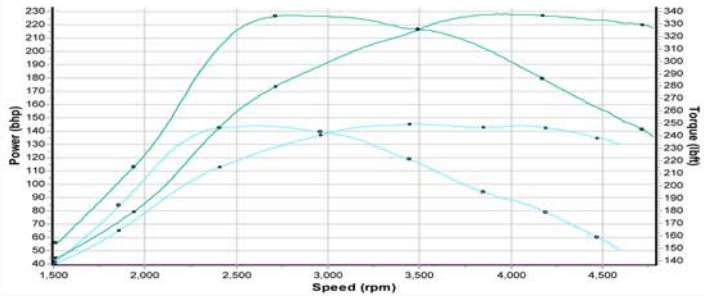
Registration No. :		Date Tested :	17/05/2010
Vehicle Type:	HONDA 2.2 CTDI 138BHP	Gear Used:	5
Operator Id :	Graham	Ramp Rate :	Intertia
Customer :		MPH per 1000 RPM :	27.34
Comments :			

RUN NO 1

Maximum Power - Wheels	119.1	bhp @ 3,176 rpm	Correction Factor	100.4 %
Maximum Power - Engine	145.4	bhp @ 3,482 rpm	Environment Temperature	19.2 °C
Maximum Torque	248.3	lbft @ 2,613 rpm	Barometric Pressure	1009 mBar

Run No 4

Maximum Power - Wheels	200.4	bhp @ 3,853 rpm	Correction Factor	100.3 %
Maximum Power - Engine	228.1	bhp @ 3,933 rpm	Environment Temperature	19.0 °C
Maximum Torque	336.6	lbft @ 2,808 rpm	Barometric Pressure	1009 mBar



Power Line
Torque Line

Tel: (01726) 892873
Email: enquiries@celtictuning.co.uk
Website: www.celtictuning.co.uk

Celtic Tuning
www.celtictuning.co.uk

Celtic Tuning, Unit 3 Victoria Trading Est. Victoria Business Park, Roche, St Austell, Cornwall PL26 8LX

CELTIC TUNING WILL USE ALL RESONABLE ENDEAVOURS TO ENSURE THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AT THE TIME OF PUBLICATION. CELTIC TUNING RESERVES THE RIGHT TO MAKE SUBSEQUENT CHANGES AND SERVICES MAY BE MODIFIED, SUPPLEMENTED OR WITHDRAWN.