

Gregor from Switzerland – Caterham CSR 200 with 2.0 TP 290

I built my own Caterham CSR 200 EU4 in 2010 at home in my garage.

Although I was very pleased of the kit, I was not so happy that the original Caterham engine came already completely fixed and ready for installation into the chassis. So having my dream completed of building my own car, but not the build of an own engine.



Later, when I ran the car on the road, I didn't like that the original engine was always running in extremely hot condition due to the emission friendly super lean mapping. Furthermore I didn't like it, how the engine run towards its rev. limit – the 2.3 didn't seem to be happy with engine speeds above 6500 per minute, what's not exciting due to its long stroke.

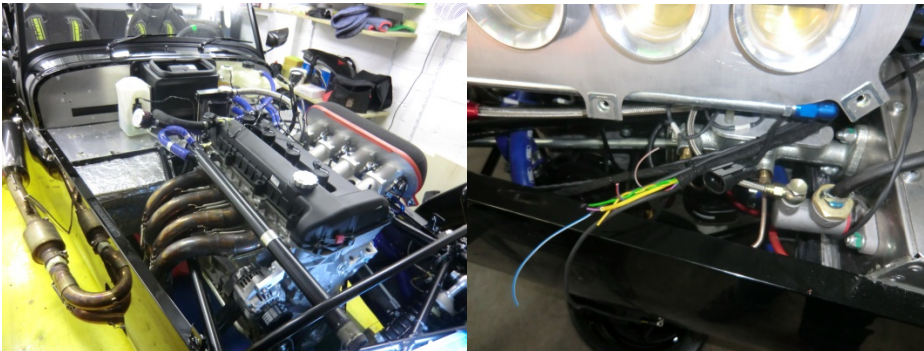
I started searching on the internet and very soon I get caught on the fantastic SBD-Homepage. After some e-mails back and forth with Steve, I decided to learn something and tune up my Caterham with a complete SBD engine. The project run over 2.5 years and I split it up into 3 milestones, not at least due to the capacity of my purse...

1. Adaptation of all ancillary components how they would be positioned with a 2.0 (electric waterpump, throttle bodies, wiring loom, altered position of the alternator etc. + remapping) on the original 2.3 engine. Very important: everything specially the wiring loom with the chassis loom must be able to 100% being dismantled to stock due to periodical SVA/MOT- Test.
2. Building up a complete exhaust after Steve's plan.
3. Building up a 2.0 with the TP290 kit + several even higher quality parts for longer endurance.

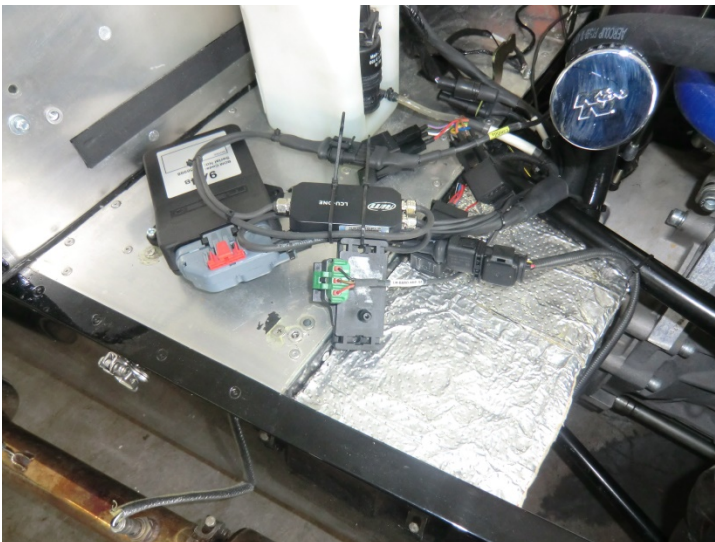
Milestone 1 – fitting throttles and ancillary components:



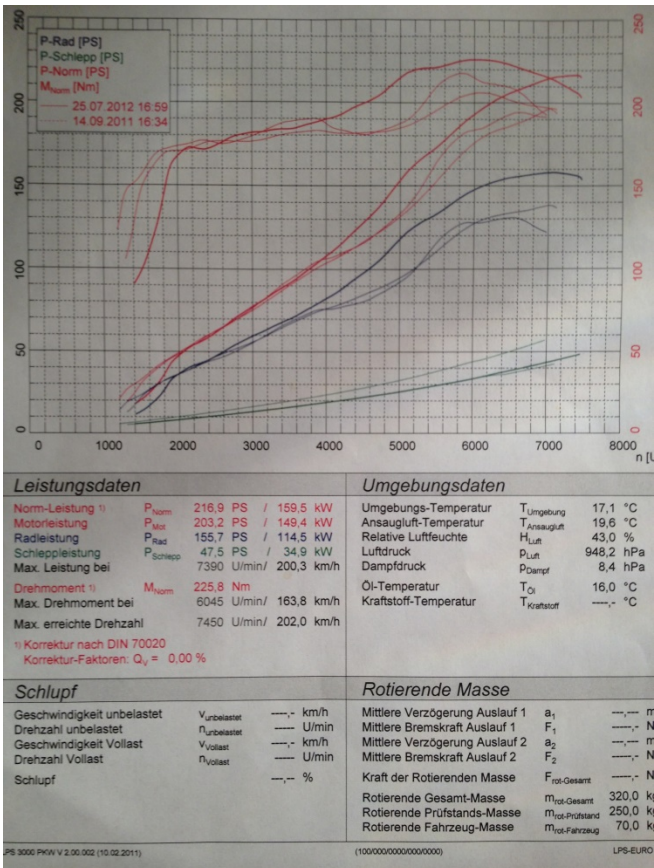
The kit came perfectly arranged and complete. Assembly and fitting was not any issue with the very good fitting instructions on SBD's homepage. I made the throttle cable out of a MTB-brake cable.



Ready for connection of chassis and engine loom, then rolling road! It is a very good advice to let the real connection work be done by a car-electronic specialist.



The loom is equipped with wide band lambda sensor and baro-sensor for higher altitudes which we certainly have in Switzerland.



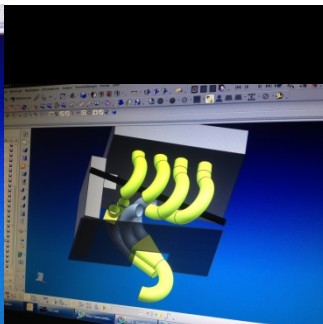
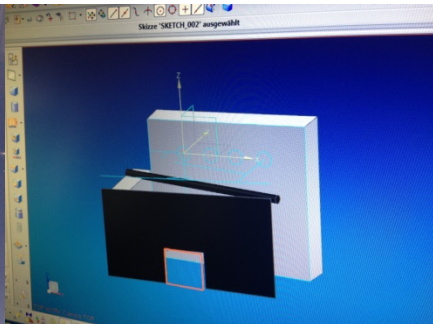
First power figure, with Steve's Throttle bodies: 217PS and 225Nm, completely original my CSR had 194PS and 215Nm.

Milestone 2 – building of my own Airbox + Exhaust after Steve's plan:

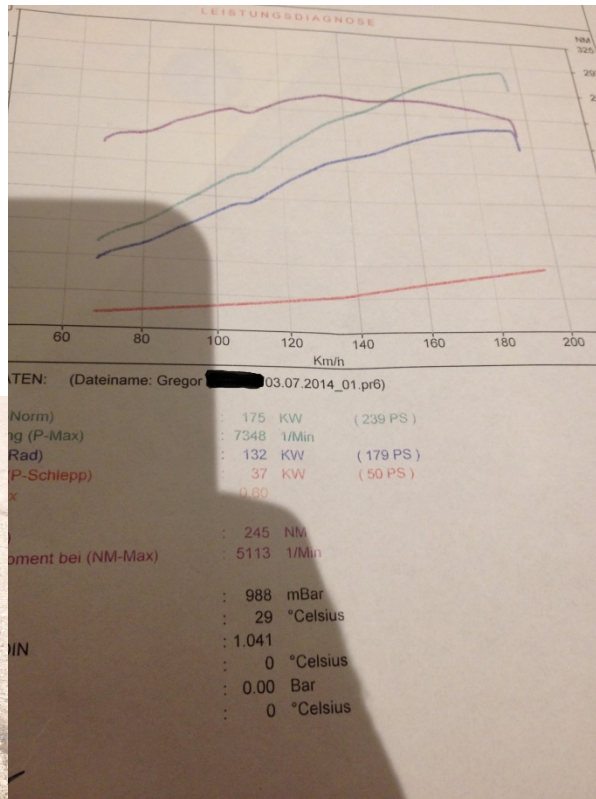




Exhaust:



It was in fact possible, to keep the length of the 4 primaries within 3mm. The result was excellent!



Very nice work – [www. Jaegermetall.de](http://www.Jaegermetall.de)

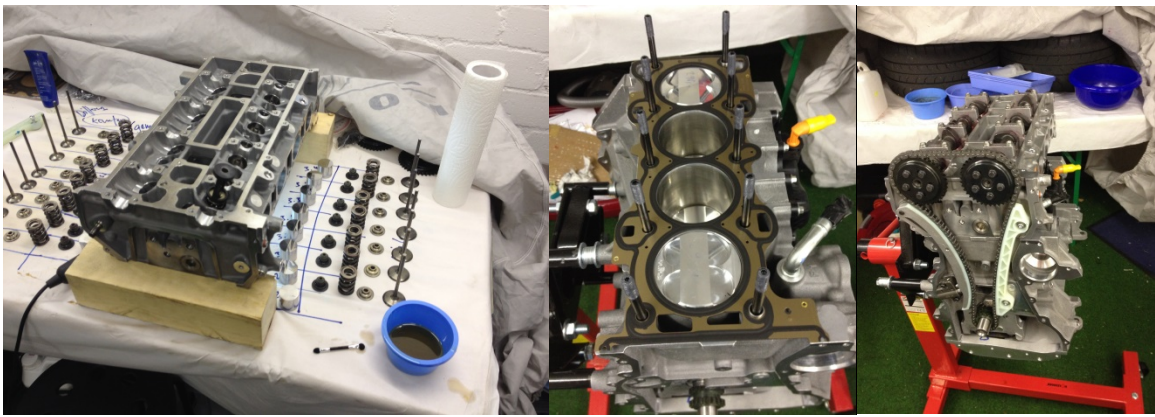
The powerfigures were even nicer: 239 PS and 245Nm of torque, out of a NEVER opened Caterham CSR 200 engine!!!!!! Who would need here a 2.0 one man could argue?

Milestone 3: TP290 engine build! 😊



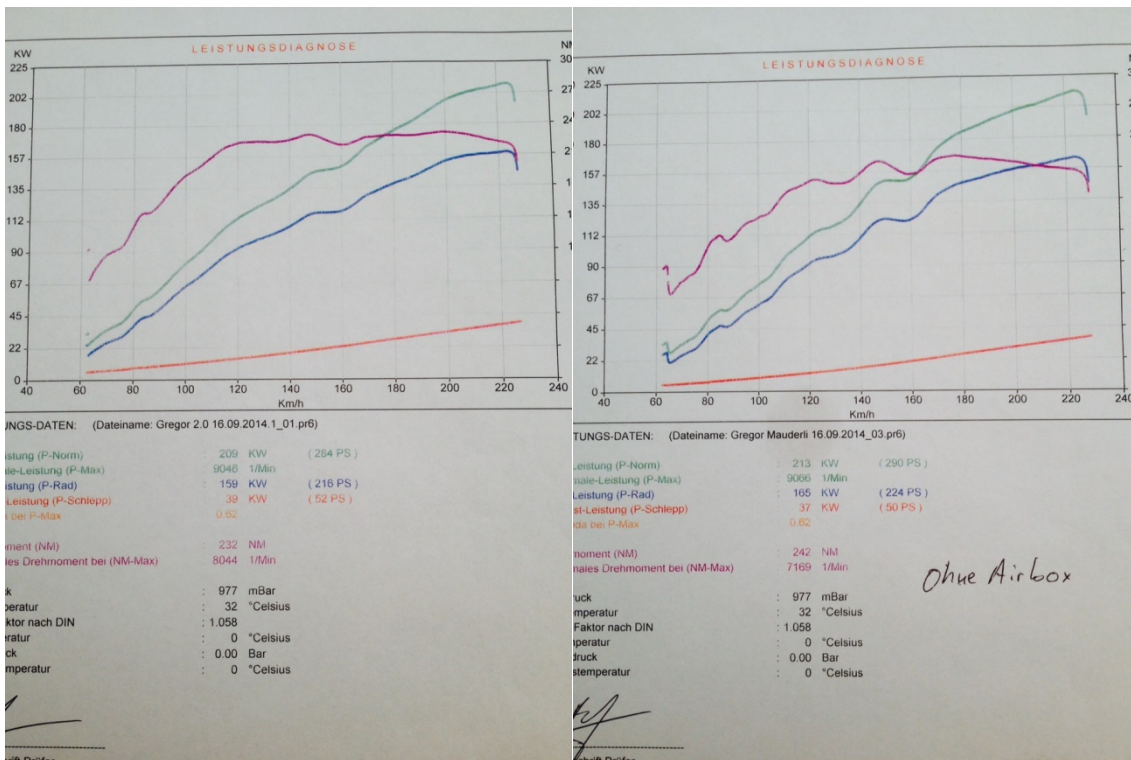
It all came complete and perfectly prepared, not one screw was missing!





The engine build was one of the most fascinating experiences I have ever made so far.





The rolling road in September 2014. Very nice power and torque curves. I am 100% satisfied.

But how does it behave on the road?

The engine starts always on the first key turn. Idle is very stable and it is possible to drive away up from idle **without** throttle, first gear goes until 48 mph!! I agree it is not at all a dealbreaker for such an engine, but it is astonishing anyway. Even in city traffic, engine pulls nicely in deep revs, super surprising for this power output. Driving out of town, engine speed exceeds 4000rpm. And that's the point, where the real fun starts. Torque is already almost on top (225Nm +) (see above the almost straight torque „curve“) and pushes the Caterham in every gear fiercely forward. Like this it goes until 7000. Absolutely adequate even for really fast street purposes. The engine speed hangs super directly on the throttle blips by down shifting, what a pleasure!! Passengers (and driver as well!!) are deeply impressed by the accelerating power – and the throttles are not even fully opened!

If you then decide to give the last 40% of throttle-opening – WOW, what a rocket, what an engine!! It screams up to 9000, and you can't feel any indication, why this masterpiece would not stand another 1000 or 2000 revs more... but better shifting up... Next gear, same pressure, every second you have to shift up into the next gear... This is the most fascinating engine I have ever driven, even in comparison with my Kawasaki ZX-10R or a Porsche 911 GT3.

This engine makes you addictive. And you never want again to drive anything other in a Caterham on an open, twisting road.

So my project comes to an end now.

I just wanted to say thank you to Steve, Craig and the whole Team, thank you for all your patience with a painful amateur like me and all your good and extremely helpful advices. The whole project took a lot of time, a good amount of GBP – but I would do it all again and again if I would have to.