



2004 ECC-IV PMS tuning tips

To start off with lets set the throttle position sensor, so the PMS is on the right load tables. Warm the car up to operating temperature (180-198). Do this with a drive, don't just let it sit and idle. Set your base idle (with the idle motor unplugged) at 850-900 rpm with the throttle screw. Now check your T.P. sensor voltage with a volt meter. Take that voltage (lets say it is 1.04 volts) and go into the PMS option to TPS voltage and set idle voltage to 1.06. Now turn off key and turn it back on. It should say idle now on the data screen. If not readjust voltage numbers until it does. This gets the PMS in sink with the load table.

Stand alone

With your base timing set at 10 degrees and the stand alone turned on with nothing in the PMS, the total timing is 25 degrees at W.O.T. above the rpm and throttle position you chose to turn on the stand alone. Air fuel is 12.8 to 1 at W.O.T. with a correctly calibrated Pro-M mass air meter in the stand alone tables.

Knowing this, it is easy to tune if you know how much timing you want. If you want 32 degrees at wide open throttle at 6000 rpm, you put +7 at WOT at 6000 rpm in the PMS and this will give you 32 degrees total at 6000 rpm.

Timing ranges for 5.0 Mustang:

Natural Aspirated on pump gas 9.5 compression 29-32 degrees total advance at 6000 rpm.

Supercharged on pump gas 14 lb of boost 17-21 degrees total advance at 6000 rpm.

The trick to tuning the timing is the curve not just the total advance. You have to experiment with this and see what your combination likes. The same goes for the fuel curve.

Understanding the boost tables

I will try to explain this best as I can. Let's say your car has 14lb of boost at

6000 rpm. If you have the boost table turned on in the PMS and have the max boost set at 20 lb. you have at MAX boost 6000 rpm -10. This will give you a total timing at 6000 rpm with 14 lb of boost 18 degrees.

How to calculate this out is by the following: Take the timing you have in max boost (-10) and divide it by the setting you have in for boost which is 20, then multiply it by the cars max boost at 6000 rpm. So it will look like this: $-10 \div 20 \times 14 = -7$. That means the PMS will pull 7 degrees out of your base of 25. So you will have 18 degrees.

If you have timing put in at WOT, let's say you have +4, that would be included with the boost timing so you would have 22 degrees at 6000 and 14lb of boost.

I hope this helps

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