

Duramax LMM DPF and ECM Programming Do's and Dont's

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The release of the LMM Duramax has brought forth new emissions and new forms of tamper detection by GM. This is not to say that these vehicles cannot be modified, but if one does so it should be done smartly. I will point out right now that tampering with the emissions systems on these vehicles is illegal and should not be done for on highway use.

Duramax Diesel Particulate Filter aka DPF, DPF delete, DPF test pipe

The Diesel Particulate Filter is a simple filter device designed to catch and hold particulate (soot) matter and hold it rather than allowing it to pass as smoke or soot. This DPF uses two pressure ports and two exhaust temperature sensors to provide operating condition (soot load) feedback to the ECM. The ECM determines when the soot load becomes excessive and then enters what is known as Regeneration aka: regen mode. To perform regeneration, the vehicle must be driven at a speed of over 30mph for several minutes. During this regeneration mode the ECM utilizes post injection which essentially injects diesel fuel into the cylinder during the exhaust stroke. This extra fuel combusts inside the exhaust system creating excess heat which burns the soot which has accumulated in the DPF. While on the surface this system seems pretty smart, the problem is that the excess fuel used for regeneration comes from your tank thus reducing your MPG significantly.

Duramax ECM Programming History

The Bosch ECM used in the LMM Duramax has an added tamper tattle tale. It stores the last 10 ECM programming sessions. This means if you load ANYTHING other than GM's own sequential updates there will be a record stored. This record will not say who or when only that some non standard programming has been loaded. Additionally, the GM Service Programming system will not allow the technician to download the same updates repeatedly so there should only be a couple lines of entries and it will also not work to repeatedly load the OEM tuning thus filling all 10 lines with the same info. This will be a dead giveaway. This is not to say that there is no safe way to modify your vehicle. Read on...

Duramax LMM Safe and Practical Modifications

I hope that I did not scare you with the information provided above. When dealing with the LMM I prefer the KISS approach. Keep it Simple Stupid. The modifications applied should be easily reverted to stock so as to avoid suspicion and detection should there be a need for warranty service. I'm not saying that I condone beating the crap out of your truck until it breaks, what I prefer to do is simple, basic changes that produce safe, reliable performance improvements as well as hopefully some nice MPG gains to boot. The best place to start is with my [Kennedy Custom ECM Programming](#). Now if you were paying attention I warned you that programming would lead to detection right? Well kind of. What I prefer to do here is an ECM clone/swap. This way the OE computer is not altered in any way, shape, or form and can be easily [swapped back and forth](#) as the need arises. You will find that my

tuning is highly under rated and that most others are highly over rated. The ECM tuning is the key to both performance and MPG. Alone it does well. Alter the exhaust and it does even better.

Exhaust modifications are another key. A DPF back system is really a waste of money for anything other than looks. The real culprit causing reduced MPG and performance is the DPF. Again it is not legal to remove the DPF or alter in any way. What we do offer is a DPF Test pipe. This pipe is meant to be used to get the truck home should your DPF plug on the road. It bolts in from flange to flange for a simple swap in/out. When used in conjunction with an ECM swap and the appropriate programming there should be no DTC codes set. You could also do a full exhaust if so desired. This makes things a bit more difficult (time consuming) to return to stock though so I prefer to stick with the simpler mods.

As the owner of three Duramax powered trucks: 2002 LB7, 2005 LLY, 2007 LBZ I have run the gamut of mods. The more I do the less I modify. My 2002 is more of a street/competition vehicle and is the most modified of the bunch. The 2005 is my work horse. While it has the option of a 190HP tune I most commonly run it on the 50HP level. My 2007 LBZ is my least modified and simply runs a Kennedy Custom ECM. The exhaust is still stock which is the equivalent of a LMM with a DPF test pipe. I like to be able to get in my trucks and go. Hook anything I want to the hitch and tow as fast as I want to go without worry of excessive smoke or EGT. I want long dependable service from my powertrain and clean, soot free oil when it comes time for service. This is what I have to offer to you the consumer. Look around my web site. You will see my accomplishments, my trucks, where we live, my toys, etc. I am not just a salesman pushing product. I offer free tech advice and maintain a strong presence on the Duramax Forums. You will find that there are many competing web sites out there, but one thing you will find missing is any personal accomplishments or presence. Also a lack of true tech support other than simply "buy this because my customers like it" I run most of what I sell on my own trucks and test much of it on my own [Superflow Chassis Dyno](#).