



Diesel Particulate Filter Diagnosis

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In our last Tech Bulletin “OBID II and the New Clean Diesel” we took the opportunity to start a dialog about the most recent advances in diesel diagnostics. We discussed the expansion of OBID II into the diesel world and some of the issues it might present for those of us in the aftermarket. We will now expand this discussion and focus on one aspect of the after-treatment system – the Diesel Particulate Filter (DPF).

In the past year we have been fielding an increasing number of calls to our Tech Line concerning the replacement of DPF's. Mostly, do we make one and what does it cost? In some cases perhaps a legitimate question but further investigation reveals that with some diagnostics and testing, replacement may or may not be necessary.

Tech Line Case 001: Customer calls looking for a replacement DPF for a 2007 GMC Sierra 2500 6.6L. His customer is calling in from the road and reports that there is a message on his dash board saying the DPF is bad and to refer to Owners Manual. Translation – there is a message on his Electronic Vehicle Information Center (EVIC). It states, “Clean Exhaust Filter-See Owners Manual Now”. The urgency here lies in the fact that should you continue to drive without heeding this message permanent damage could occur which would lead to replacement of the DPF. However by following a couple of simple steps, the Powertrain Control Module (PCM) will regenerate the DPF and return it to normal operation. The procedure for this particular vehicle is to drive the vehicle over 30mph for 20-30 minutes or until the message is cleared. Please note that the procedure varies greatly from vehicle to vehicle and you should always refer to the Owner's Manual or a reliable source for the proper procedure.

Now that was an easy fix! However if soot accumulation was greater than normal or some other problem existed the message on the EVIC may be accompanied by a Check Engine Light and a code P2463 – Excessive Soot Accumulation. This is a Type 'A' code and will set immediately. Should this occur, proper diagnosis of the Pressure Sensor and all related parts will be necessary. The customer may also complain of a lack of power as the PCM will revert to “Reduced Engine Power Mode” aka Limp-In.

Tech Line Case 002: 2007 Dodge Ram 2500 5.9L. Customer arrives at the shop with a complaint that the truck is losing power. After performing a visual check and a couple of tests, the technician determines that there is a restriction in the exhaust. History tells him that the most probable cause is a bad converter. The converter is replaced but the lack of power persists. Further examination shows that there is a code P1451 stored in the PCM but the check engine light was not illuminated. This is normal for this vehicle. By performing the code diagnosis the technician learns that the PCM needs to perform a regeneration of the DPF and that there is a passive and active regeneration process. To do a passive regeneration, drive the vehicle at 50-60 mph for a minimum of 45 minutes. (Note that this is different than the previous vehicle.) The active regeneration is done in the shop using a scan tool.

Becoming familiar with all the systems currently being employed in the diesel market for exhaust after-treatment can seem like a daunting task. We learn that when we take each vehicle on as a new challenge and do the necessary homework, we find that these jobs can be easy and profitable. As to the question of aftermarket availability, be assured that Magnaflow is continually working towards fulfilling the needs of our customers. As the demand grows so will our commitment to supply the right part for the job.

Cleaning up the environment...one converter at a time

Gary

