Summer is Upon Us

Another winter and spring has come and gone and now we face the hot dry summer. At least the OIS system does not create the shop heat as much as the BAR 97. I can imagine those dyno fans will be used to cool the shop down more than they will be used on dyno testing! Stay cool, safe, and drink lots of water.

Thank You for Making Us Successful!

We can’t say enough how much we appreciate you. Our class enrollments are up due to the best advertisement available, your word of mouth. Thank you all.

And of course we will offer you the best available smog check training. Remember, when you have a question never hesitate to call, we will always do our best to assist you.

Speaking of training, we have submitted our next update course to BAR for approval. We think you will like it. Once approved, it will be offered starting in October or November for 2017-2018 renewals; more on this in an upcoming newsletter.

The BAR OBD Reference Guide

If you haven’t downloaded it yet, get the latest Smog Check OBD reference guide on the BAR website. It was updated in March. There are additional vehicles, including many important TSBs and recalls. Because of the TSBs and recalls, the guide went from 28 pages to 204; lots of information on OBDII monitors.

2002 GM Duramax EGR Monitor Update

In our last newsletter we mentioned the difficulty of getting the EGR monitor to run on 2002 Duramax diesels. Since then BAR has added this vehicle to their Smog Check OBD Reference guide. The guide states for this vehicle that if only the EGR monitor has failed to run, then it can go to the referee for an inspection. The guide also says: “Investigating; Possible difficult drive cycle.”

We have been doing our own research and have found a drive cycle method that works most of the time. But it involves accelerating at WOT through the shift points. This would mean you could be going too fast to be legal and safe, unless you have access to an old drag strip or abandoned airport. The referee might be a better choice.

It seems the MAF sensor needs to be verified by a large amount of air flow, then when the truck comes back down to an idle the EGR monitor runs.

Maybe GM will come out with a re-flash that can change the parameters of the MAF readings required for EGR verification.
Be aware of Fuel Trims When Monitors Will Not Complete

We have all had times when several of the monitors on a gasoline fueled vehicle just won’t run; after several drive cycle attempts have been tried it is time to look deeper into the matter. Here is one instance where the fuel trims were out to lunch on this 2001 Mazda, the monitors would not complete.

By graphing the OBD data, the tech discovered a major fuel trim problem. The LTFT values were either 0% or +25%, an unusual condition; they were randomly changing. We would like to see them around +/- 5%. When at +25%, even random changes, means there is something very wrong. If the LTFT values are this high, most vehicles will set a MIL. The reason that this vehicle didn’t was because the powertrain control module (PCM) must see the LTFT at +25% for a certain amount of time before it will set the P0171 code. Evidently this vehicle had not met the criteria consistently. The PCM also set a pending P0300 while the vehicle was at a cruising speed of 55 miles per hour.

He found a torn air boot between the mass airflow (MAF) sensor and the throttle body, which was allowing unmetered air into the engine when the vehicle was under acceleration (motor mount flex?).

Jesse had a very similar vehicle where a CAT monitor would not complete. The CAT monitor criteria included driving the vehicle at speed, then upon decelerating to an idle, foot on the brake, in gear, the oxygen sensors would be monitored for oxygen storage of the CAT. The Cat monitor would not run when doing the drive cycle. Jesse found that the fuel trims went to the + side when at idle and his foot on the brake.

You guessed it, a leaking power brake booster. Replaced the booster and the monitor ran.

We may have fewer vehicles to repair for tailpipe because of OIS, but there are still many repairs to be done because of the monitor issues.

And just because ..... Another modified rear oxygen sensor. This photo was taken by a bright student in a Level 1 class that was looking at a Honda Civic for sale. Needless to say the vehicle was not sold that day.

Take care,

Jerry Esmay