GVWR, not plate weight, determines need for emissions compliance

Effective at the end of September, the Indiana BMV has tightened a much utilized loophole that allowed customers to request a 10,000 plate in order to avoid compliance with the emissions testing program.

In year's past, a truck or van (and in some cases even cars) that failed emissions could simply go to the BMV and pay extra for a 10,000 pound plate and avoid having to fix their failing vehicle. Some folks would even pay extra for the heavy plate just to avoid testing, whether or not their vehicle would have passed.

Much to the chagrin of these vehicle owners, BMV is now requiring the motorist to plate the vehicle appropriately based on the GVWR. For many, this means trucks that have failed and have not been repaired and maintained appropriately will now be required to be in compliance with the testing requirements they should have be subject to all along.

What does this mean for technicians? You may expect to see a larger number of failing trucks than usual, and many of these vehicles will probably need extensive repair because their emissions failures have likely become gross failures.

Clean Air Car Check's Top Ten DTCs

Code	Definition	Total Vehicles
P0420	Catalyst System Efficiency Below Threshold (Bank 1)	1079
P0171	Fuel Trim Too Lean (Bank 1)	1066
P0401	Exhaust Gas Recirculation Flow Insufficient Detected	932
P0174	Fuel Trim Too Lean (Bank 2)	679
P0300	Random/Multiple Cylinder Misfire Detected	670
P0442	Evaporative Emmision Control System Leak Detected *(small leak)*	522
P0440	Evaporative Emmision Control System Malfunction	517
P0141	O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	500
P0455	Evaporative Emission Control System Leak Detected (gross leak)	374
P0133	O2 Circuit Slow Response (Bank 1 Sensor 1)	355

Clean Air Car Check
Envirotest Systems
1171 Breuckman Dr.
Suite B
Crown Point, IN 46307

technicallyspeaking.

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A MONTHLY PUBLICATION FOR THE PROFESSIONAL AUTOMOTIVE TECHNICIAN

E-85 can cause monitor trouble

By John Yelkich, Diagnostic Technician, Clean Air Car Check

There have been a number of vehicles rejecting at Clean Air Car Check emission test sites for lack of a sufficient number of completed monitors. This is nothing new to anybody who has been in the vehicle emission repair business, but the reason for some of the rejects may come as a bit of a shock. We are finding that the use of E-85 is precluding some vehicles from achieving the monitor enable criteria.

The vehicles that we have seen with this issue are predominantly General Motors small pick-up trucks from the early 2000's. There have been three GM S-10 flex fuel vehicles that rejected for incomplete monitors in the last two months. When the customers were asked if they ran E-85 in their vehicles, they all acknowledged that they run exclusively on E-85. Having acknowledged the possibility of E-85 being at the root of some incomplete monitor issues, we decided to do some more checking.

When we investigated the monitor enable criteria, (termed "Conditions for Running" by Alldata) we found that the last condition listed under "Cold Start" was a fuel alcohol content of no more than 11%. E-85, by definition, is 85% alcohol. This means that the cold start definition has not been met; therefore no monitors using cold start as one of the criteria will run and on this GM truck and that includes all of the non-continuous monitors.

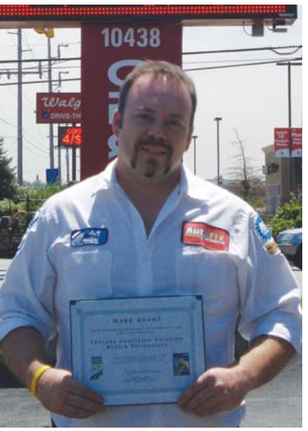
Fuel composition and alcohol content on GM vehicles is determined by one of two methods. The first method is the fuel composition sensor. This is a straightforward measurement by the vehicle of the percentage of alcohol in the fuel. The second method of determining fuel composition is by calculation based on 02 sensor input. In this method the 02 sensor values and fuel level from the previous trip are stored in the PCM. On the next key cycle the PCM checks the fuel level and if it sees an increase it looks at the 02 to determine if the vehicle is running leaner than the previous trip. If it is running leaner, the PCM assumes E-85 was added and a fuel composition calculation is performed. This is a simplified description but it does help to illustrate the point.

I believe the same monitor issue we are seeing with the GM products also exists with some Chrysler vehicles. If you should encounter a vehicle with an incomplete monitor issue, be sure to ask the customer if they are using E-85 in any amount. If they are, ask them to run the E-85 out of the tank and refill with gasoline. It may take more than one refill to run the alcohol content down to an acceptable level but once it reaches that level the monitors should run.

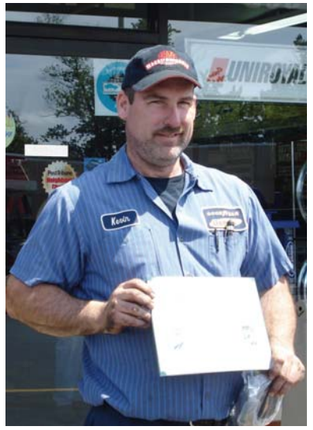
Congratulations to the Class of 2008

Introducing the Newest Indiana *Certified Emission Repair Technicians*

Clean Air Car Check congratulates it's class of 2008. Seven new technicians are now state certified emission technicians after providing documentation of current ASE A8 and L1 certification and the successful completion of an intensive 60-hour training course. An eighth technician, Troy Tolley, updated his ICERT certification after previously having taken the EDGE course. One additional tech successfully completed the course and will become state certified upon acquisition of his ASE A8 and L1 certificates.

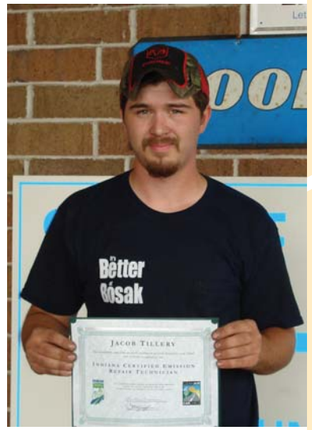


Mark Adams
Auto Fix
10438 Indianapolis Blvd., Highland
219-924-0300

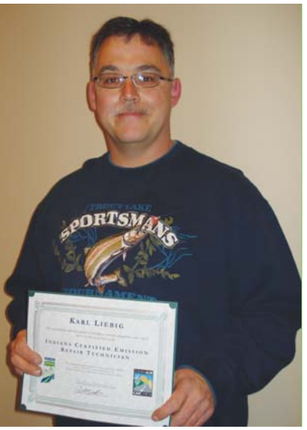


Kevin Burgess
Brown Tire
2404 N. Calumet Ave., Valparaiso
219-462-3109

Jeff Napiwocki
Knight Automotive*
825 N. Indiana, Crown Point
219-663-0400



Jacob Tillery
Bosak Chrysler Plymouth
3111 W. Lincoln Highway, Merrillville
219-738-2323



Karl Liebig
Portage Quick Change
6093 Central Ave., Portage
219-762-0188

Mike Levan
Quick Hick's Garage
10765 Randolph St., Crown Point
219-662-0270

Troy Tolley (2nd from left) and Steve Edwards (3rd from left) are pictured with ICERT course instructors Ken Zanders (left) and John Yelkich (right).

Troy Tolley
Frank Tolley's Auto Service
1020 E. Summit St., Crown Point
219-663-4459

Steve Edwards
Thomas Dodge Chrysler Plymouth
9604 Indianapolis Blvd., Highland
219-924-6100

**Technician is an Indiana Certified Emission Repair Technician, but repair facility is not yet.*

Failure for *"No Communication"* can be caused by many factors

"No Communication" failures are not very common at the Clean Air Car Check emission test sites, but over the last few months we have seen some interesting cases where lack of communication was the cause for failure.

1) There have been several 2000 and newer Volkswagon Beetles that have failed for no communication due to the fact they have aftermarket stereos installed. There is a bulletin regarding this issue from Volkswagon. The most common fix we have seen is the replacement of the aftermarket stereo with the factory stereo.

2) There has also been at least one instance of a no communication failure in a GMC Yukon due to the installation of an aftermarket remote start system. The installer used the ground at the ALDL to ground a stereo component and caused the PCM to delay communication causing the emission test equipment to "time-out" and fail the vehicle.

3) We have seen some no comm issues as a result of pin integrity at the OBDII connector. If the vehicle has spent a lot of time with a scan tool connected to it there is a tendency for the weight of the connector to force downward and spread the pins open. If you have a vehicle that has failed for no comm, check pin retention to ensure good contact for future testing.

As we do in every year, we start early testing on October 1st for the following year's test cycle. This means odd year vehicles are subject to emission testing again. There were a few issues with 2003 vehicles that I would like to cover simply as a refresher:

1) Certain 2003 Hyundai Tiburons have failed for no comm due to a lack of ground on pin 5 of the OBDII connecter. TSB 03-01-003-01 addresses this concern.

2) Although not a "No Communication" issue, some 2003 Ford Focuses are subject to TSB 06-7-5 for monitor completion issues. If you should experience a repeated reject with one of these vehicles, the service bulletin may address the issue.

For more information contact John Yelkich, Clean Air Car Check Diagnostic Technician, at 219-661-5456.