Utah County 2019 Diesel Emission Results

7A	Total number of diesel powered vehicles inspected using computerized technology:	7,915	Total	
7B	The passage and failure rates of diesel powered vehicles using computerized technology			
	Pass	5,559		70.23% of computerized vehicle total
	Fail	594		7.50% of computerized vehicle total
7C	Total number of diesel powered vehicles visually inspected.	16,095	Total	
7D	Passage and failure rates of diesel powered vehicles visually inspected.			
	Pass	12,999		92.81% of visually inspected total
	Fail	873		5.42% of visually inspected total
7E	Total number of visually inspected diesel powered vehicles with tampering.	574		3.57% of visually inspected total
7F	Total number of diesel powered vehicles with programmer tampering.	286		

Tampered Vehicles

H.B. 101 required reporting on tampering. None of the other current emissions programs in the State require that determination. Although we have provided training for our technicians, covert testing, which has been primarily carried out in 2020, has identified a weakness in documenting these failures. The requirement to document these failures along with Utah Counties' decision to consider illegal programmers to be tampering, has been key to evaluate the impact of the EPA report on Tampering and Aftermarket Defeat Devices[1] in Utah County. Some important results that should be noted:

66% of computerized (model year 2007-2014) visual inspection failures included tampering.

50% of the tampered vehicles were programmer tampering.

33% of **all** vehicles failed in the visual tests included programmer deletes.

Utah County air shed has been significantly affected by deliberate diesel tampering.

A full programmer delete can increase NOx pollution by 310 times and PM by 120 times than that of a non-tampered Tier 3 vehicle. It may appear that the value of pursuing such a small portion of the fleet is insignificant. In fact, it should be noted that the 286 vehicles with programmer tampering may be creating more than two times the PM emissions and more than 9 times the NOx emissions of all the other 12,999 passing vehicles combined.

Not Ready Vehicles

Computerized vehicles (model Year 2007-2014) will indicate "not ready" if the ECM is cleared or power is disrupted prior to testing and operation of the vehicle has not allowed for OBD evaluation of emission systems. Our testing indicated we had 19.27% of the vehicles tested not ready. That is an excessively high percentage. Removing a programmer just prior to testing would result in a not ready test. It is

[1] OECA EPA Presentation OBD Stakeholder re Tampering and Aftermarket Defeat Devices November 27, 2019.

probable that many of those "not ready" tests were previously tampered vehicles. EPA determined the National average for deleted diesel vehicles to be 13%.

Vehicle Registrations Moving to Non-Testing Jurisdiction

We have identified vehicles having moved their registration address out of our County rather than performing the repairs. The smoking vehicle hotline allows the public to lodge a complaint about vehicles with excessive visible emissions. This has provided documentation that some of these vehicles are still operating in the County. It would close a loophole to require vehicles that have failed and emission test or had a complaint lodged, to document an address change rather than just accepting the change at face value. This is also a problem we have seen in our gasoline vehicle emissions program.

Programmer Deleted Vehicles

In November 2019 EPA reported on Tampering and Aftermarket Defeat Devices[1]. In this report EPA concluded that when a defeat device enables the full removal of emissions controls (effecively taking a Tier 3 certified diesel vehicle back to Tier 0) NOx can increase 310 times, NMOG can increase 1,140 times, PM can increase 120 times and CO can increase 40 times.

[1] OECA EPA Presentation OBD Stakeholder re Tampering and Aftermarket Defeat Devices November 27, 2019.