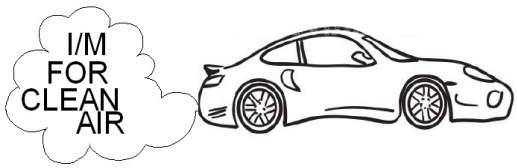
http://www.utahcountyonline.org/Dept/HealthEnvirAir/VehicleEmissions/index.asp

UTAH COUNTY TECHNICAL BULLETIN

November, 2011-5



ESP EQUIPMENT UPGRADE

ESP is performing the equipment upgrade in two phases. Phase one will take approximately 3 hours and includes cleaning the cabinet, installing a new printer, monitor, filters, zero air bottle and OBDII module. The technician will also evaluate the condition of other components such as cables, leads, probes, keyboards, barcode scanners, and the overall analyzer appearance. The person performing the upgrade may not be an ESP field service repair technician and therefore will not have any additional parts on hand, or be authorized to perform additional repairs beyond the standard upgrade. Any other parts on the analyzer that are in poor condition should be noted on the work order. An ESP representative will review the work order and perform a follow-up visit if it is determined that your analyzer needs additional work.

Once the software has passed the certification process, phase two may begin. Phase two should take one hour or less and includes installing a network interface card and a new hard drive with pre-loaded software. The analyzer will need to be connected to the internet during phase two and must be able to communicate with the VID via the internet in order for testing to begin on the new system.

ADDITIONAL TAMPER ITEM

Over the years, many technicians have requested an area in the analyzer program to enter OBDII system tampering. With the new software you'll notice the addition of "OBDII system" to the tampering checklist on 1996 and newer vehicles. The same entries of Pass, Fail or Not Applicable will be used on this new item. The vast majority of OBDII vehicles will receive Pass for "OBDII system." Here are a few examples of what an appropriate OBDII system failure would be: DLC damaged or missing, 02 emulator found on the vehicle, O2 sensor spacer or extender found, reprogrammed computer to disable monitors, variable or fixed resistor in place of an original sensor, HD vehicle with MIL illuminated, CNG 201 bypass vehicle with the MIL illuminated while running, etc. "Not Applicable" would be entered on 1996 and newer heavy duty vehicles that are not tested using OBDII and they do not have an illuminated MIL while running.

REFURBISHED EQUIPMENT AVAILABLE

If you wish to replace your existing analyzer, setup a new station, or ad an additional analyzer to your current station, ESP has refurbished UTAH2000 equipment available. The analyzer is built with mostly new components but may have some refurbished internal parts. The price of a "new" machine is $6500.00 and this includes the upgrade installation. These analyzers are fully functional on the current dialer system and may be used as is until the upgrade is installed.

TIPS ON HOW TO CONSERVE CALIBRATION GAS

When you turn on your calibration bottles be sure to open the valves **completely**. Gas may leak out around the "T" handle of the valve if it is not opened up all the way. Turning off the valves after each use may seem obvious, but it is quite frequently overlooked.

If you find that you don't do tailpipe tests very regularly, you can extend the typical 3 day calibration requirement. To do this, go through the station manager menu > station identification, and enter "Y" in the "OBDII only"box. If you forget, or if someone else in the shop has set the analyzer to OBDII only and you attempt to do a tailpipe test you will get the message "The vehicle under test is not eligible for an OBDII inspection." Go back and change the OBDII only from "Y" to "N," perform your calibrations and do the tailpipe test. You may switch between testing modes as often as you wish.

There is a learning curve for using the Zero Air bottles efficiently. You'll need to turn on your zero air bottle when you perform the bench calibrations and whenever you perform a tailpipe test. Calibrations consume about 5 PSI and the auto-zero during a test tends to consume about half that. If you turn the zero air bottle on when you initialize a test, the auto-zero and HC hang-up check will be completed in the background while you are doing the data entry portion of the inspection. Turn the zero air bottle off when the "insert exhaust probe" screen appears or after the prompt changes to "HC Hangup check." Our experience is that very little zero air is actually used during a bench auto-zero but the analyzer will attempt to auto-zero on all inspections. Therefore if you leave the zero air valve on while performing an OBDII test, you'll unnecessarily use your zero air.

ANALYZER/VID COMMUNICATIONS

One of the more noticeable changes during a test with the new software is the new communication protocol. During an inspection there may be either one or two communications with the VID. If a VIR barcode is scanned for owner/vehicle information there will only be one VID communication at the end of the inspection. If only partial owner/vehicle information is entered, such as a manual VIN and plate entry or scanning the registration renewal card there will be a VID query at the beginning of the test as well. A VID query takes between 20-30 seconds, during which time you will see the message "Communicating with County Computer." If a previous test record is found on the VID, all the owner/vehicle information will be imported into the analyzer fields.

Also, it will no longer be necessary for you to shutdown your analyzer each night. The analyzer will place itself in shutdown after 8:30 p.m. if no activity has been detected within the previous 2 hours.

TECH TIP # VE0056
Flex Fuel Vehicle Testability issues

All of the major automotive manufacturers have been producing flex fuel vehicles for some time now. The number of these vehicles in service is increasing and there are now ethanol blends above E10 available in Utah County. (Currently 5 stations sell E85 fuel in Utah County)
The EPA allows exceptions to OBDII monitoring while a flex fuel vehicle is operating on ethanol blends above E10.
Depending on the vehicle manufacturer, and the ethanol percentage, the following OBDII monitors may be desensitized or disabled : fuel rich, fuel lean, lean misfire, EVAP, O^2 sensor heater, secondary air, catalyst.
So, if you're fighting a readiness issue on a flex fuel vehicle you may want to talk with the customer and verify what fuel they're currently running. The vehicle may be performing as designed and a lower ethanol concentration fuel may need to be run temporarily in order to get the monitors to run.

Analyzer upgrade, # 2 FAQ's (Frequently Asked Questions)

Q. Why is ESP removing the zero air generator (ZAG) internals while performing the upgrade? Wouldn't this be considered a downgrade?

A. Removing a working ZAG and replacing it with a pressure cylinder would be considered a downgrade if the ZAG were functioning when removed. Your current ZAG has exceeded it's useful life of 6 years by a considerable margin. In order to provide high purity, particle free, dry air the ZAG uses a desiccant canister and catalyst which both have a finite life. Stations have a choice as to whether or not they want a new ZAG, but in most situations it is cost prohibitive to pay $1800.00 + for a new ZAG. A high pressure cylinder purchase/lease is a much more cost effective alternative.

Q. Why is the OBDII CAN module on the outside of the back door after an upgrade?

A. The Vetronix OBDII module has a reset button. In the past, to reset the module the analyzer had to be completely powered down. With the module mounted on the outside of the analyzer it can now be reset independently of the analyzer. You should perform a reset when a vehicle won't communicate with the analyzer. When performing a reset it is important to disconnect the cable from the vehicle. Now, find an object that fits into the reset hole (a paper clip works well) and press the reset button.

Q. Will the VID have previous test data available to us now, or will it take a year to develop the database?

A. The new VID has five years of legacy data from our current dialer system. If a vehicle has been previously tested within the Utah County I/M Program the vehicle/owner information should be available on the new system.

Q. Why are the dial-up communications diagnostics still in the menu?

A. ESP chose to keep these menu items for possible future use during communication diagnostics.

Q. Will the obsolete Safety Inspection menu items be removed in the new software ?

A. Yes, any reference to Safety Inspection has been removed.

Q. What happens when you select the new "network diagnostics" from the menu?

A. The "network diagnostics" menu item is used to verify your connection to the internet. Your analyzer will ping a website and expect a return. No files are transferred during this function.

Q. What happens when you select the new "Data File Refresh" option from the menu?

A. The "Data File Refresh" menu item forces your analyzer to connect to the VID and download specific files, without doing an inspection. This button would be used to get your certificates or receive a new technician that transferred to your shop. Note: Any pending file downloads will automatically happen each time the analyzer communicates with the VID, such as after an inspection.

Q. Is there a minimum cylinder pressure for the zero air bottle to work?

A. Yes, the calibration gases, along with the zero air, must have a minimum pressure of 15 PSI to perform a calibration or auto-zero.

Q. Are no-comm lockouts really a thing of the past?

A. Yes and No, In order for the new system to work properly all analyzers need to be connected to the internet at all times. The analyzers will be capable of performing a reasonable number of tests "offline". The number of offline tests is configurable and may be different for each station. If a station chooses to push the limits of the maximum tests performed offline the analyzer will lockout. A call to the County will be necessary to clear the lockout.