Albuquerque/Bernalillo County

Vehicle Pollution Management Program

Air Care Inspector Training Manual

Albuquerque Environmental Health Department
Vehicle Pollution Management Division
1500 Broadway Blvd. NE
Albuquerque, NM 87102
www.cabq.gov/aircare
(505)-764-1110

Version 1.0

Overview

Motor vehicles are the primary source of air pollution in the Albuquerque metropolitan area. Like many western cities, Albuquerque is characterized by relatively little industrial pollution but high vehicle miles of travel from sprawling residential areas commuting into employment centers in the city's core. The air pollution problem in the middle Rio Grande valley is compounded by our topography as thermal inversions in the winter and stable air masses in the summer trap pollutants between the 10,000 foot high Sandia and Manzano mountains to the east and 7000 foot high volcanic escarpment to the west.

The Albuquerque/Bernalillo County Vehicle Pollution Management Program was first implemented in 1982 as required by the Federal Clean Air Act of 1977 to address violations of the national ambient air quality standard for carbon monoxide (CO). Testing was initially conducted using dynamometers at two large test stations with four test bays each. This original centralized program suffered from long lines and was shut down less than two years later due to a New Mexico Supreme Court ruling which prevented the City from collecting test fees to help fund the program.

New Mexico subsequently became one of only eight states to suffer EPA sanctions and lose federal highway funding for failure to operate a required vehicle inspection and maintenance program. State law was changed to allow for the collection of station, inspector and inspection fees and the program was restarted in 1989 as a BAR84 a two-speed exhaust and equipment tamper inspection in the current decentralized format where official inspections are conducted by private Air Care stations licensed by the City.

Consistent with the Federal Clean Air Act Amendments of 1990, the program was upgraded to not only a two-speed exhaust and tamper inspection using a BAR90 analyzer beginning in 1996. Vehicles were tested at idle and at 2500 rpm with four gas readings (CO, CO2, HC and O2) taken at each speed to aid in the diagnosis and repair of excessive CO or HC failures. BAR 90 added enhanced data storage and retrieval via modem or CDRW ability.

The Clean Air Act Amendments of 1997 required that test programs use On-Board Diagnostic (OBDII) technology to test 1996 and newer vehicles beginning in 2004. The program was upgraded to the current BAR97/OBDII/gas cap test platform in 2004 with additional upgrades being made to better focus on the reduction of ozone precursors (hydrocarbons and oxides of nitrogen). These included tighter HC tailpipe standards, pressurized gas cap testing, and OBDII failures for HC/NOx related diagnostic trouble codes.

Additional upgrades were made in 2011 to allow for gas/electric hybrid testing beginning in 2012 and the testing of 1998 and newer diesels vehicles beginning in 2013. The analyzer currently in use is able to conduct two-speed exhaust tests on 1995 and older model year vehicles and the more comprehensive OBDII test on newer vehicles.

The Vehicle Pollution Management Division (VPMD) of the Albuquerque Environmental Health Department administers the Albuquerque/Bernalillo County Vehicle Pollution

Management Program. The headquarters and retest/referee facility is located at 1500 Broadway NE and houses a training room and two large test bays with 5 analyzers that are used for training Air Care Inspectors and for conducting free retests of vehicles that have failed an emission test at any of the more that 140 certified Air Care Stations located throughout the Albuquerque metropolitan area. In 2013 the program tested 251,434 vehicles with failure rate of approximately 11% of all vehicles tested.

Table of Contents

1. Purpose of this Training Manual

This manual is designed to serve as both a study guide for individuals seeking to become certified as Air Care Inspectors and as technical reference guide for working inspectors.

2. Inspector Training and Certification

VPMD trains and certifies over 180 new Air Care Inspectors each year. Currently there are over 500 active inspectors working in the Air Care program at 144 certified Air Care Stations. Inspectors must recertify annually. Inspector certification and activation is provided for a cost of $35 per station and is billed to the station after an inspector is activated in the analyzer.

Individuals may reserve a spot in the next available certification course by completing an application form and providing photo identification to the VPMD headquarters at 1500 Broadway NE. The initial certification course is offered at least once a month. Course work involves two days of classroom instruction and one to two days of practical training using the emission analyzer to test a variety of vehicles. A passing grade of 75% or better on the written exam and demonstrated competency in conducting both two-speed exhaust and on-board diagnostic tests is required for all new inspectors.

Successful candidates will be issued an Air Care Inspector certification and will be assigned a personal identification number and access code. Certificates are valid for 12 months. The Emissions Inspection System (EIS) or analyzer will automatically remind inspectors of the need to recertify at least 30 days prior to certificate expiration. If the inspector does not recertify, the EIS will automatically deny access or "lock out" the inspector upon certificate expiration.

3. Basic Expectations of Certified Inspector

As an Air Care Inspector you play a critical role in maintaining and improving the air we breathe and thus the quality of life here in the greater Albuquerque area. Inspectors are reminded that while they may work for themselves or private companies they also represent the Air Care Program and must conduct themselves to the highest standard. Certification is not a property right and VPMD will suspend or revoke certifications for unprofessional behavior, incompetence, or fraud.

Air Care inspectors shall follow this training manual and uphold the regulations established by the Air Quality Control Board at all times. An Air Care inspector shall:

(a) Never allow another person to use the inspector's personal identification number or access code
(b) Never delegate authority to another person to perform any part of an official test.
(c) Never advise a motorist that a vehicle will fail a test before the official test is complete.
(d) Never attempt or allow adjustments to be made on a vehicle during the inspection.
(e) Never adjust or repair a vehicle in a manner which will cause the vehicle to fail a test.
(f) Always sign all Vehicle Inspection Reports (VIRs) at the time of the inspection.
(g) Always advise motorists with failed tests that they may obtain a free retest within 90 days at the VPMD headquarters station at 1500 Broadway NE.
(h) Always give notice to VPMD of any change in legal name, employment status, or mailing address as soon as possible but not later than 10 calendar days.

4. Vehicle Testing

4.1 Vehicles Requiring Inspection

A motor vehicle that **IS SUBJECT** to testing refers to any vehicle which:

- is less than 35 years old;
- has four or more wheels;
- has a gross vehicle weight rating (GVWR) of 10,000 lbs. or less;
- is registered to a resident of Bernalillo County,
- is registered in another county but driven 60 or more days per year into Bernalillo County;
- or is a government or other fleet vehicle which is located or primarily operated in Bernalillo County;
- **Alternative fueled vehicles (such as CNG, propane) require testing** and shall be tested on the fuel they are operating on.

All motor vehicles less than 35 years old with a gross vehicle weight rating (GVWR) or 10,000 lbs or less must be inspected and certified upon change of ownership.

This includes all gas, diesel, alternative fuel and electric hybrids….

even if they are less than four years old.

4.2 Vehicles Not Requiring Inspection

Vehicles that **ARE EXEMPT** include the following:

- vehicles that are purchased new until they are 4 years old or until change ownership;
- vehicles that are **owned or operated** by the armed forces of the United States or New Mexico National Guard that are uniquely military in nature;
- motorcycles, mopeds, golf carts, go-carts, recreational cycles;
- vehicles that have a GVW of 1000 lbs. or less
- vehicles that have a gross vehicle weight rating (GVWR) **greater than 10,000 lbs.**;
- vehicles that are defined as **off-road construction or farm equipment**;
- **dedicated** electric vehicles.

Hybrid Electric Vehicles require testing starting in 2012 and can be tested at any Air Care station.

Diesel Vehicles require testing starting in 2013. 1998 and newer diesels can be tested at any Air Care station. Older diesels can only be tested at the VPMD Headquarters Station at 1500 Broadway NE.

Gray Market vehicles, Kit Cars, and vehicles with **engine swaps** should be referred to the headquarters station at 1500 Broadway NE if there is a question on test requirements.

When in doubt, call VPMD Headquarters at 764-1110.

4.3 Frequency of Inspection

All vehicles shall be tested on a **biennial** or every other year basis unless there is a change of ownership in which case a new test is required and the test clock is reset. MVD normally sends notices of registration renewal and "emissions certification required" to vehicle owners at least forty-five (45) days prior to the registration due date.

Vehicles with measured emissions exceeding 75% of their allowable tailpipe emissions will be limited to a one-year emissions certificate and registration.

4.4 Customer Consent to Vehicle Test

The Air Care Station will have the option to have the customer sign a customer consent form which will document that the customer authorizes the station to conduct the test and agrees to pay the posted inspection fee. VPMD provides a template in both English and Spanish for this purpose. Recommended alternatives for a consent form include a repair order, work order, bill or receipt.

5. Testing Procedure

Before starting the test, inspectors should conduct a visual check of the vehicle to verify that the vehicle is safe to test and to determine which emissions test is applicable to the vehicle. For those vehicles presented for inspection which are exempt, the Air Care Inspector must inform the owner that vehicle inspection is not required and refer them to VPMD for additional information.

Before proceeding with the emissions test the inspector must ensure that the vehicle is safe for testing and will not present any safety hazards that could endanger the inspector or the general public.

Examples of **unsafe** conditions include:

- Major systems leak (fuel, oil, transmission, coolant, exhaust, etc.),
- Inability to hold steady engine revolutions per minute (RPM),
- Unusual engine noises (loud knocking),
- Emergency/parking brake system is inoperable,
- Unsafe hood operation (hood does not stay open),
- Engine warning lights on for engine temperature, oil, etc.

Inspectors should refuse to test unsafe vehicles but must document the rejection and report it to VPMD as soon as possible. Documentation should include the date, time, inspector, station, vehicle description, plate number and the reason for the rejection. No fee will be collected for rejected tests.

5.1 Vehicle Preparation

Vehicle preparation procedures are as follows:

- Verify that the transmission is in park (Automatic) or in neutral (Standard) and set the parking brake.
- Vehicles requiring a two-speed idle test must have been driven a minimum of 15 minutes to achieve normal operating temperature which can be verified by checking the temperature gauge.
- Turn off all accessories (including air conditioning).
- Ensure there is nothing in the shop environment, such as equipment or tool boxes, which prevents the inspector from clearly observing the exhaust for visible smoke.

The core of the Inspection/Maintenance Program is the vehicle inspection test consisting of the following six parts:

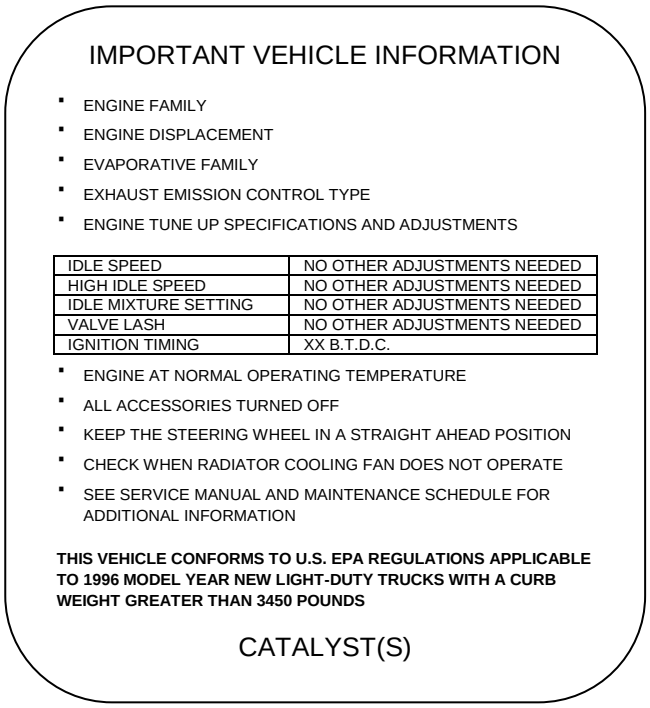
1. Visual inspection of the catalytic converter and connections for all vehicles.
2. Tailpipe exhaust analysis for 1995 and older vehicles.
3. On-Board Diagnostic (OBD) test for 1996 and newer vehicles.
4. Visible emissions test for all vehicles.
5. Gas cap pressure test for model year 2005 and older vehicles.
6. Diesel opacity testing at VPMD Headquarters

5.2 Visual Inspection of the Vehicle

After evaluating a vehicle for safe operation, the inspector will collect and verify the following for entering into the computerized EIS Emissions Inspection System.

The Air Care Inspector shall determine for each vehicle being inspected the specific year and model of the vehicle and what emissions control devices or equipment should be in place and operable. The inspector should first consult the emissions label and then, if necessary, the inspector should check their approved emissions control system application guide (Mitchell or Motor manual or Mitchell On-Demand or All Data subscription service, to obtain more information:

- Check the **under-hood label**, (see Figure 1.0 below). Since the 1972 model year, federal law requires every new vehicle to be equipped with a permanent label within the engine compartment. The label should contain the following information:
    - Name of vehicle manufacturer
    - Statement as to whether the vehicle conforms to California or U.S. Environmental Protection Agency (EPA) emissions control requirements;
    - Engine size in cubic inches (CI), cubic liters (CL), or cubic centimeters (CC);
    - Exhaust emissions control type displayed with initials like EM (engine modification), AIR (air injection reactor), or FI (fuel injection); this procedure is not always reliable, but should be checked as necessary;
    - Engine tune-up specifications and adjustments recommended by the vehicle manufacturer, including speed, ignition timing, air/fuel mixture, and idle carbon monoxide (CO) setting, if adjustable.


IMPORTANT VEHICLE INFORMATION

- ENGINE FAMILY
- ENGINE DISPLACEMENT
- EVAPORATIVE FAMILY
- EXHAUST EMISSION CONTROL TYPE
- ENGINE TUNE UP SPECIFICATIONS AND ADJUSTMENTS

IDLE SPEED	NO OTHER ADJUSTMENTS NEEDED
HIGH IDLE SPEED	NO OTHER ADJUSTMENTS NEEDED
IDLE MIXTURE SETTING	NO OTHER ADJUSTMENTS NEEDED
VALVE LASH	NO OTHER ADJUSTMENTS NEEDED
IGNITION TIMING	XX B.T.D.C.

- ENGINE AT NORMAL OPERATING TEMPERATURE
- ALL ACCESSORIES TURNED OFF
- KEEP THE STEERING WHEEL IN A STRAIGHT AHEAD POSITION
- CHECK WHEN RADIATOR COOLING FAN DOES NOT OPERATE
- SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION

THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO 1996 MODEL YEAR NEW LIGHT-DUTY TRUCKS WITH A CURB WEIGHT GREATER THAN 3450 POUNDS

CATALYST(S)

Figure 1 Under-hood label example

- For unlabeled vehicles, the Air Care Inspector can identify the year or the vehicle and identify the emissions control system by:
    - Using the 17 character Vehicle Identification Number (VIN) (1980 and newer) the tenth (10^{th}) character will identify the year model of the chassis and the fourth (4^{th})character will identify the GVWR for domestic trucks only.
    - By referring to the VIN affixed to the vehicle, then using the approved emissions control manuals to identify the engine and its required emissions control devices, as well as mechanisms.

5.3 Visual Inspection Pass/Fail Determination

An Air Care Inspector shall gather the data (See Table 1.0 EIS EMISSIONS INSPECTION SYSTEM Data) from the vehicle presented for emissions testing and enter it into the EIS. The Air Care Station shall have available current references such as emission control application guide books approved by the Program Manager that can be used for reference purposes. There is computer software available commercially that can be used in place of these guide books. Contact the Program headquarters for more information.

Inspected vehicles with <u>any number of catalysts</u>
- **<u>removed,</u>**
- **<u>modified or</u>**
- **<u>rendered inoperative,</u>**

shall "FAIL" the visual inspection.

If all catalysts are installed satisfactorily and are clearly intact, the vehicle shall "PASS" the visual inspection portion of the test.

Vehicle Identification Number	Vehicle Make	Vehicle Model Year
Gross Vehicle Weight (trucks only)	Engine Size	Body Type
Fuel Type	Odometer Reading	Number of Cylinders
Exhaust Configuration	License Plate ID	Catalyst Inspection Result
Test Type	Zip Code	Transmission Type

Table 1.0 EIS Emissions Inspection System Data

The required emissions control devices shall be visually checked to determine whether they are <u>installed properly</u>, <u>modified</u>, <u>disconnected</u>, or <u>removed (anti-tampering)</u>.

For all vehicles, the Air Care Inspector shall enter "P" (pass) or "F" (fail) or "NA" (not Applicable) as appropriate for the catalytic converter(s). The EIS - Emissions Inspection System will display a visual prompt on the screen when this PASS/FAIL/NA information should be entered by the inspector.

6. Operation of the Emissions Inspection System

Each Emissions Inspection System - EIS is capable of measuring the proportions of carbon monoxide (CO) and hydrocarbons (HC) emitted by a motor vehicle at high RPM and idle conditions, and each EIS provides for retests of the high RPM and/or idle condition if the initial readings indicated a FAIL. Each EIS has emissions diagnostic capabilities, and each maintains a tamperproof record of all emissions tests performed. Each machine is equipped with tamper switches that are quality control functions to prevent damage or program alterations. Measurement of CO and HC exhaust emissions is accomplished by an infrared system that is contained within the EIS itself.

Operation of approved EIS is simplified by the use of computer controlled messages on a video display screen that tell the inspector what step to take next. These messages may require actions to be performed on the vehicle itself or they may call for the inspector to enter information on the EIS keyboard.

For example, if the Air Care Inspector selects the "Vehicle Inspection Mode" by pressing the indicated key(s) on the EIS keyboard, the EIS will begin by requesting the inspector to enter information about the vehicle, such as the vehicle identification number, the vehicle make and model, the year of vehicle manufacture, and so forth. Generally, EIS have built-in "help" functions to provide additional guidance during the inspection process. EIS inspection sequences also require the inspector to input the results of the visual inspection portion of the emissions test.

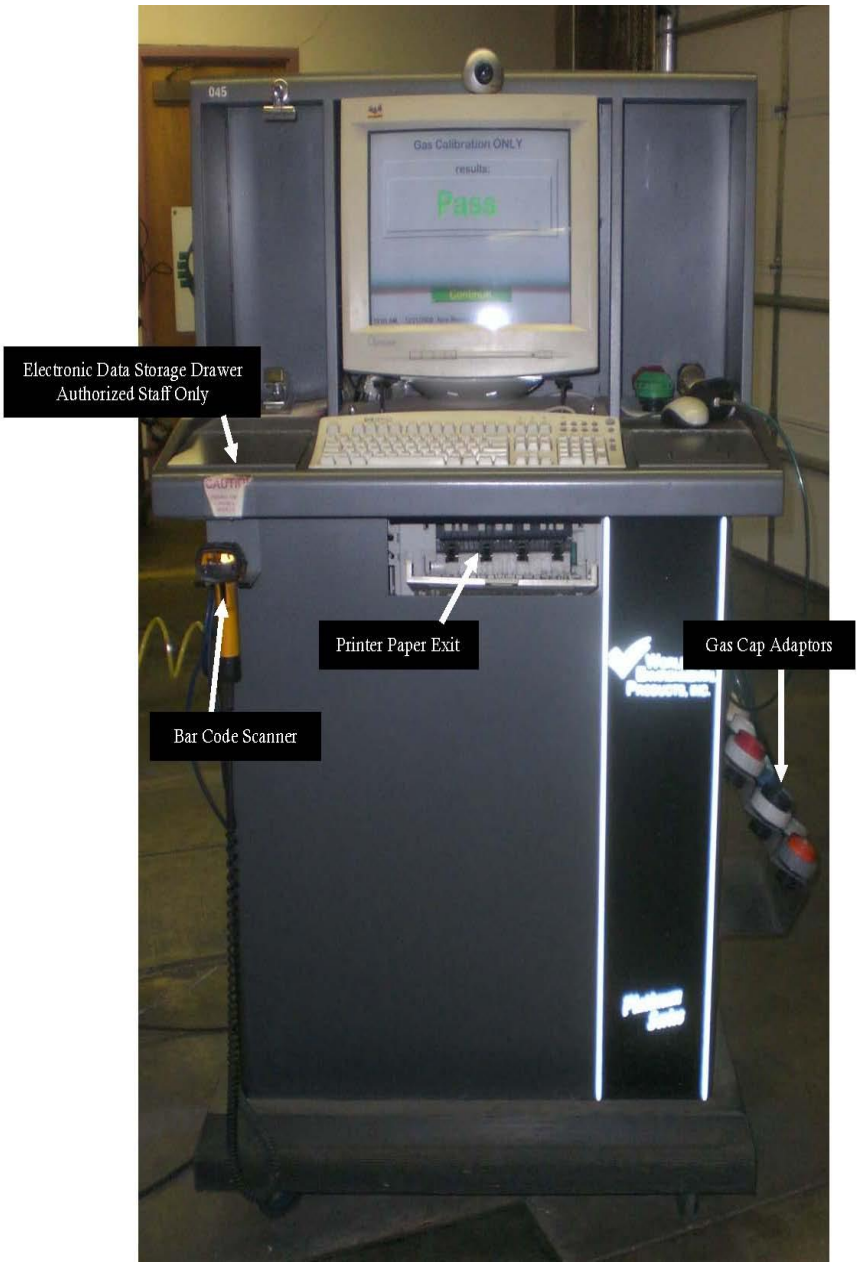


Figure 2 EIS – Emissions System

Each test type requires that a specific connector be attached to the vehicle being tested:

Figure 3 OBDII - Connector

- The OBDII cable (see Figure 3.0) connects to the vehicle's Diagnostic Link Connector via a large SAE J1962 connector end of the vehicle cable. This connection with the vehicle's computer allows the transfer of computer generated emission data to the EIS during low and high RPM cycles. Battery voltage on the vehicle for the purposes of the test must remain above 9 volts DC.

- For a two-speed test, an inductive pick-up is attached to one of the vehicle's spark plug wires, or an alternate RPM pickup device is used as approved by the Program Manager to allow measurement of engine RPMs at high and idle speeds. During these speeds, a sample probe is placed in the vehicle's exhaust pipe to collect an exhaust gas sample. The EIS automatically routes the exhaust sample through a filtering and drying system to measure the proportions of CO and HC. The EIS compares the proportions found in the vehicle's exhaust to programmed standards to determine whether the vehicle passes or fails the emissions test.

Each approved EIS is capable of printing out the results of the emissions test on Vehicle Inspection Reports (VIRs) purchased from VPMD. In addition, each EIS shall be capable of printing a Customer Report on plain paper. For purposes of quality assurance, the VIR forms are serially numbered and must be kept inside the EIS. Periodic replacement of paper and printer toner cartridges is a part of normal EIS operation routine. The serially-numbered bar-coded VIRs used for the EIS shall be purchased from the Division in groups of 100 and are not transferable to other Air Care Stations.

The EIS is designed to perform a number of other functions that are an integral part of the VPM Program. They automatically store the results of each vehicle emissions test as provided for in the specifications; they provide automated procedures for detecting analyzer leaks; and they are capable of calibrating themselves by using a quantity of "span gases" (low and high concentration blends of gases having known and standardized proportions of CO, CO_2 and HC). An internal clock keeps track of the time that has elapsed since the last calibration and leak check, and will require calibration and leak test to be performed at predetermined intervals. Each of these capabilities helps ensure the accuracy and quality of the VPM Program.

6.1 Vehicle Inspection Report

The EIS is equipped with a printer that is capable of producing a 3-part bar coded carbonless Certificate of Vehicle Inspection Report - VIR 8 ½ inches wide by 11 inches long (see Figure 4 on this page).

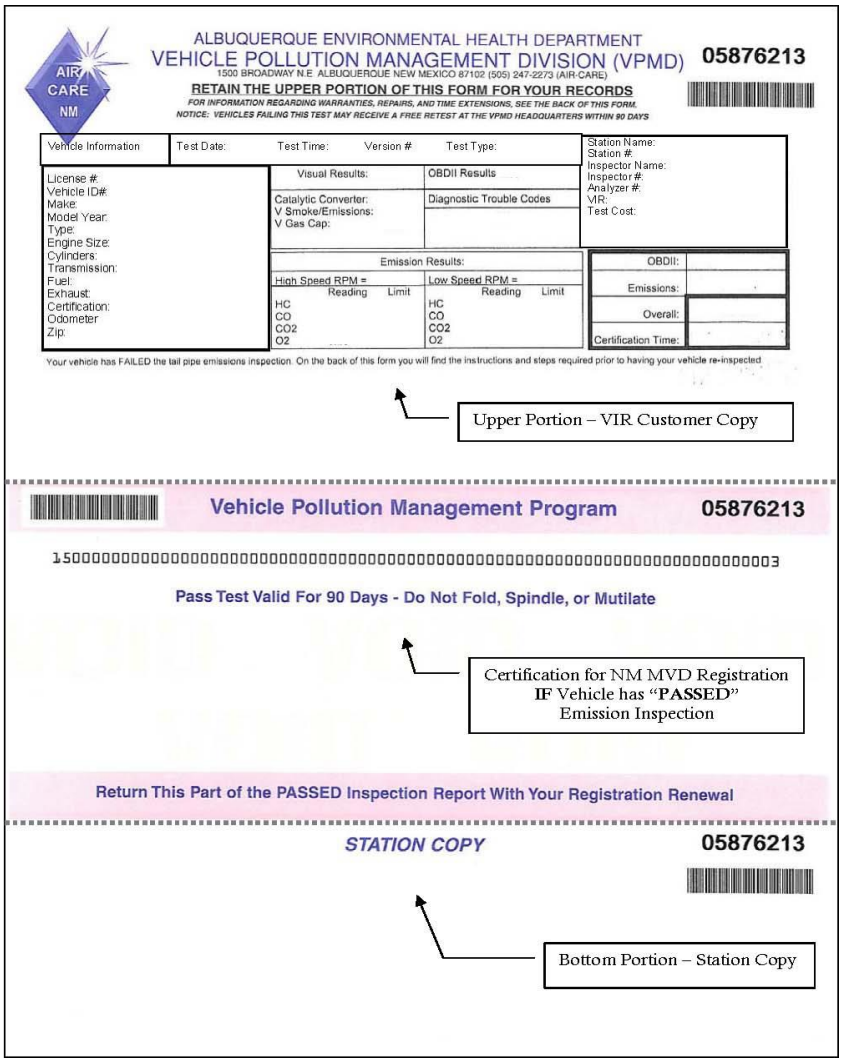
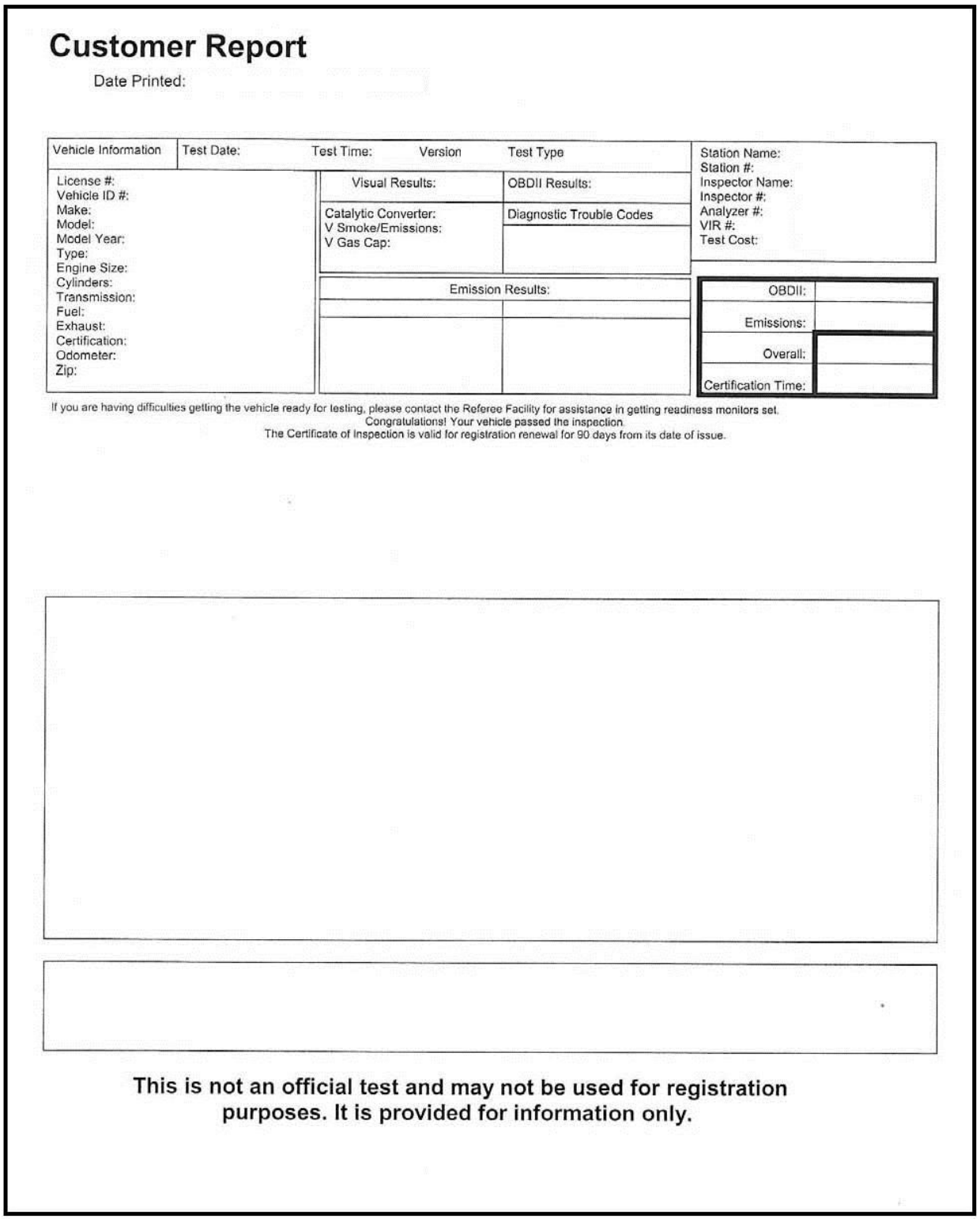


Figure 4 Certificate of Vehicle Inspection Report

6.2 Customer Report

The Customer Report (see Figure 5 on this page) is also generated by the printer in the EIS with the same dimensions and information as the VIR.



Customer Report

Date Printed:

Vehicle Information	Test Date:	Test Time:	Version	Test Type
License #: Vehicle ID #: Make: Model: Model Year: Type: Engine Size: Cylinders: Transmission: Fuel: Exhaust: Certification: Odometer: Zip:	Visual Results:			OBDII Results:
	Catalytic Converter: V Smoke/Emissions: V Gas Cap:			Diagnostic Trouble Codes
	Emission Results:			

Station Name:
Station #:
Inspector Name:
Inspector #:
Analyzer #:
VIR #:
Test Cost:

OBDII:	
Emissions:	
Overall:	
Certification Time:	

If you are having difficulties getting the vehicle ready for testing, please contact the Referee Facility for assistance in getting readiness monitors set.
Congratulations! Your vehicle passed the inspection.
The Certificate of Inspection is valid for registration renewal for 90 days from its date of issue.

This is not an official test and may not be used for registration purposes. It is provided for information only.

Figure 5 EIS Generated Customer Report

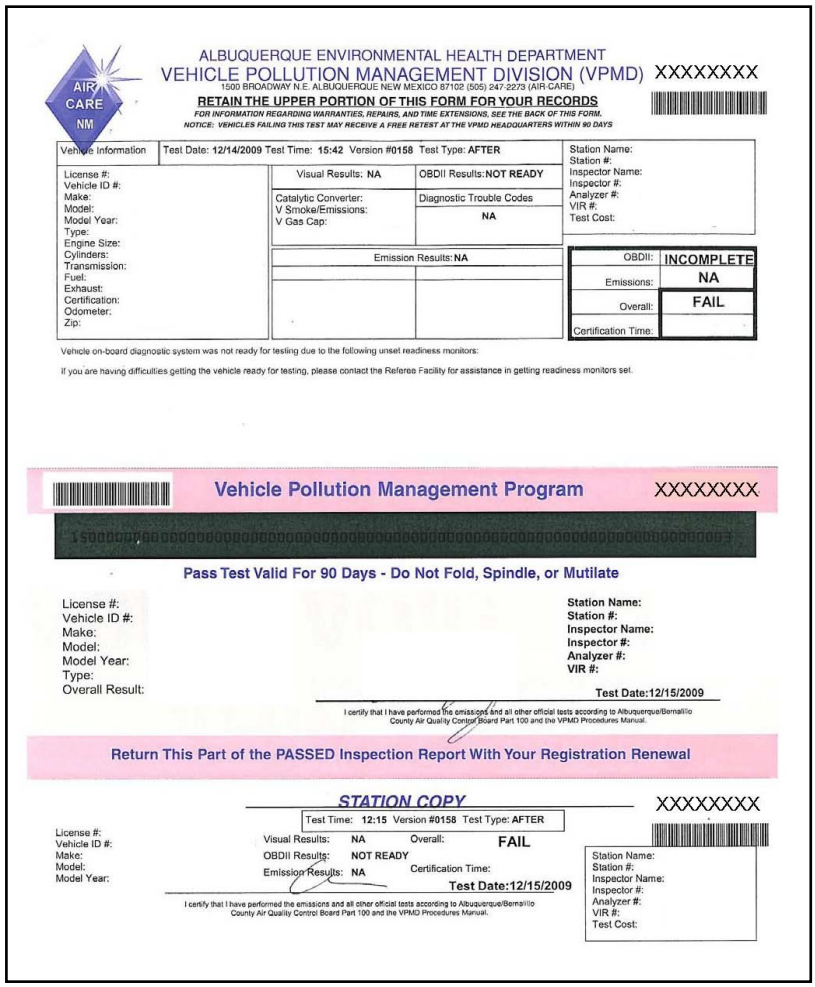
If the vehicle has failed the test, the Inspector must inform the customer of the option for a free retest at VPMD within 90 days and that only VPMD can grant a time extension for repairs.

In order to qualify for a time extension, the vehicle owner must take the vehicle, failed test, and repair receipts or written estimate from a licensed repair facility exceeding $300 to the VPMD referee/retest center at 1500 Broadway NE. The owner may choose to do the repairs themselves or have the repairs performed by another individual or shop but must use a licensed repair facility in order to qualify for a time extension.

The Air Care Station or Inspector shall not, in any manner, attempt to require subject vehicle owners to have vehicles which have received a FAIL VIR repaired at the Air Care Station. Repairs shall not be performed during the course of the emissions inspection. Inspection Only Stations cannot engage in any troubleshooting routines or repairs of vehicles failing the emissions test.

The PASS station copy, and the FAILED (blacked-out) certificates portion of the test if failed must be kept on record, filed in numerical order, in a secured location in the Air Care Station and made available and/or surrendered to VPMD staff on demand or during regularly scheduled auditing by Quality Assurance staff.

The top portion of the VIR is the vehicle owner's record of inspection, and may be presented to the Division for a free retest if the center portion is lost. This VIR is valid for only 90 days. If the entire VIR is lost, the vehicle owner may have the original inspecting Air Care Station generate a Customer Report as proof that a test was performed. This Customer Report may be presented with the vehicle at the VPM Headquarters for a FREE re-inspection.



ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT
VEHICLE POLLUTION MANAGEMENT DIVISION (VPMD) XXXXXXXX
1500 BROADWAY N.E. ALBUQUERQUE NEW MEXICO 87102 (505) 247-2273 (AIR-CARE)
AIR CARE NM
RETAIN THE UPPER PORTION OF THIS FORM FOR YOUR RECORDS
FOR INFORMATION REGARDING WARRANTIES, REPAIRS, AND TIME EXTENSIONS, SEE THE BACK OF THIS FORM.
NOTICE: VEHICLES FAILING THIS TEST MAY RECEIVE A FREE RETEST AT THE VPMD HEADQUARTERS WITHIN 90 DAYS

Vehicle Information | Test Date: 12/14/2009 Test Time: 15:42 Version #0158 Test Type: AFTER
License #:
Vehicle ID #:
Make:
Model:
Model Year:
Type:
Engine Size:
Cylinders:
Transmission:
Fuel:
Exhaust:
Certification:
Odometer:
Zip:
Visual Results: NA | OBDII Results: NOT READY
Catalytic Converter:
V Smoke/Emissions:
V Gas Cap:
Diagnostic Trouble Codes: NA
Emission Results: NA
Station Name:
Station #:
Inspector Name:
Inspector #:
Analyzer #:
VIR #:
Test Cost:
OBDII: INCOMPLETE
Emissions: NA
Overall: FAIL
Certification Time:

Vehicle on-board diagnostic system was not ready for testing due to the following unset readiness monitors:
If you are having difficulties getting the vehicle ready for testing, please contact the Referee Facility for assistance in getting readiness monitors set.

Vehicle Pollution Management Program XXXXXXXX
Pass Test Valid For 90 Days - Do Not Fold, Spindle, or Mutilate
License #:
Vehicle ID #:
Make:
Model:
Model Year:
Type:
Overall Result:
Station Name:
Station #:
Inspector Name:
Inspector #:
Analyzer #:
VIR #:
Test Date:12/15/2009
I certify that I have performed the emissions and all other official tests according to Albuquerque/Bernalillo County Air Quality Control Board Part 100 and the VPMD Procedures Manual.
Return This Part of the PASSED Inspection Report With Your Registration Renewal
STATION COPY XXXXXXXX
Test Time: 12:15 Version #0158 Test Type: AFTER
License #:
Vehicle ID #:
Make:
Model:
Model Year:
Visual Results: NA Overall: FAIL
OBDII Results: NOT READY
Emission Results: NA Certification Time:
Test Date:12/15/2009
I certify that I have performed the emissions and all other official tests according to Albuquerque/Bernalillo County Air Quality Control Board Part 100 and the VPMD Procedures Manual.
Station Name:
Station #:
Inspector Name:
Inspector #:
Analyzer #:
VIR #:
Test Cost:

Figure 6 FAILED Emission Inspection and VIR

6.3 On-Board Diagnostic Test

OBDII test - On most vehicles 1996 and newer vehicle's the on-board computer continuously runs self-checks to determine how the emission control equipment is working. The OBDII test is a faster test than tailpipe exhaust analysis and provides the added benefit of early detection of emissions related problems. A "check engine" light that stays on indicates an emissions related problem and will result in a failed test.

The first on-board diagnostic (OBD) systems were introduced in the early 1980's to lower vehicle emissions and help automotive repair technicians in the diagnosis and repair of computerized engine controls. As a result of improved technology, a new generation of OBD (OBDII) was developed for 1996-and-newer vehicles. The new OBDII systems monitor the vehicle's electronic sensors and actuators while the vehicle is being driven to ensure they are working "as designed." The on-board computer has the ability to identify a problem well before symptoms are recognized by the driver, such as lack of performance or poor fuel economy. Early detection helps avoid costly repairs and can improve the vehicle's emissions before they become excessively high.

Emission Control Functional Tests

Pollution Control Equipment (tamper check) - The Air Care Inspector checks that the emissions control equipment is installed and properly connected.

Motor vehicles shall be inspected for the presence and proper connections of original design and components designed to reduce exhaust emissions such as catalytic converters and OBDII Diagnostic Link Connectors (DLCs).

Malfunction Indicator Light
OBDII ONLY
MIL is defined by

- Check Engine
- Service Engine Soon or
- Holographic designs:

Check Engine Light-Malfunction Indicator Light

The malfunction indicator light (MIL), or "Check Engine Light", shall be checked on all vehicles equipped with an On-Board Diagnostics systems II. **Do not confuse other vehicle maintenance indicators with the MIL, e.g. oil change or check gauges.**

Key On Engine Off (KOEO)

The inspector will turn the engine off and, then key-on to verify that the check engine light is operable. A "Pass" entry indicates that the MIL properly operates and repairs are not needed. Double check the check engine light if not noted. If the check engine light does not come on, turn the key to the off position, remove the key for at least 30 seconds, and then retry before entering FAIL.

Key On Engine Running (KOER)

The inspector will then start the engine with the transmission in park or neutral and the parking brake on. The MIL should have come on and then after a brief period, gone out. A fail result indicates that either the MIL does not light at all in the KOEO position or that it remains on or flashes when the engine is running - KOER.

EIS - Vehicle Data Link Connection
Data link connector (DLC) locations vary for many vehicles. In general, DLCs are located in an open location under the driver's side dashboard. A guide and DLC locations resources are available commercially and via the EIS during an emissions inspection.

6.4 Two Speed Test

Tailpipe exhaust analysis - A computerized gas analysis is performed on vehicles 1995 and older to ensure that the carbon monoxide (CO) and hydrocarbon emissions (HC) are within accepted limits. The exhaust limits vary according to vehicle model year and weight. (see Table 2, this page)

Maximum Allowable Exhaust Emissions							
Test Type	Vehicle Model Year	Gross Vehicle Weight Rating (in pounds)	Group Code**	Idle Mode HC PPM	Idle Mode CO%	2500 RPM Test HC PPM	2500 RPM Test CO%
Type 1	1975-1978	0 to 6000	C/T	500	5.0	500	5.0
	1979-1980	0 to 6000	C/T	400	4.0	400	4.0
	1981-1985	0 to 6000	C/T	220	1.2	220	1.2
	1986-1990	0 to 6000	C/T	200	1.2	200	1.2
	1991-1995	0 to 6000	C/T	180	1.2	180	1.2
Type 2	1975-1978	6001 to 8000	LT	600	6.0	600	6.0
	1979-1980	6001 to 8000	LT	600	4.5	600	4.5
	1981-1982	6001 to 8500	LT	400	2.7	400	3.0
	1983-1988	6001 to 8500	LT	300	1.2	300	3.0
	1989-1995	6001 to 8500	LT	220	1.2	220	1.2
Type 3	1975 -1980	8001 to 10,000	MT	650	6.5	650	6.5
	1981-1990	8501 to 10,000	MT	400	4.0	400	3.0
	1991-1995	8501 to 10,000	MT	220	2.0	220	2.0
	1996-newer	All to be tested OBDII *	All	N/A	N/A	N/A	N/A

Table 2.0 Maximum Allowable Exhaust Emissions

* Certain vehicles 1996 and newer which have been determined to be OBDII non-compliant will be tested using the two-speed idle test. The exhaust standard of 100 ppm HC and 1.0% CO at idle and 2500 RPM will be used for these OBDII incompatible vehicles.
** Group code: C = Car, T = Truck/Van, LT = Light Truck, MT = Medium Truck

6.5 EIS - Emission Inspection System Overview

Follow the step by step prompts on the EIS system overview. Log on to the system to enter appropriate emissions inspection data. Please see figures 8 through 11 for examples of what the system's menus and submenus may contain. These figures illustrate actual menus and features incorporated into the software.

EIS Start-Up Procedures

Locate the Main Power (black rocker) button next to the power cord connector on the back of the EIS. To turn on the computer, locate the computer power button on the lower right hand side of the EIS (as you are facing the back of the machine see Figure 7 below). Press computer power button for one second and listen for four (4) audible beeps indicating the computer received the start-up command. The EIS requires a 15 minute warm up period.

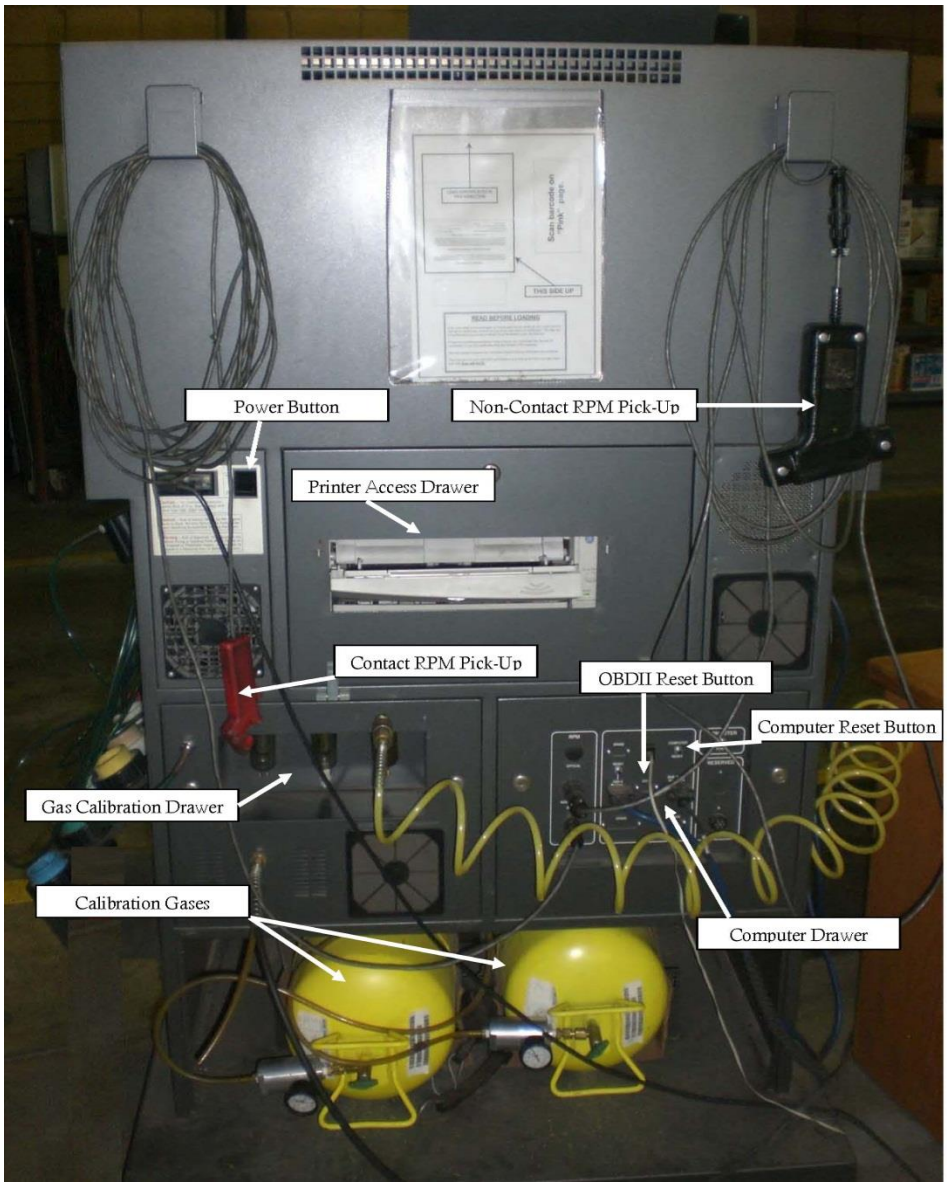


Figure 7 Back of the EIS

Vehicle Inspection System

This is the main menu (Figure 8) where an authorized inspector can choose other operational menus.

Figure 8 NM Vehicle Inspection System Menu

1. Allows access to the Emissions Inspection Menu. In this sub-menu, the authorized inspector may log in to perform an actual emissions test. The Analyzer Maintenance Menu is also available here. This sub-menu is used to perform routine calibration operations required by the EIS.
2. Allows access to the Diagnostic Functions Menu.
3. Allows Access to the Station Menu. This sub-menu includes the VIR loading function.
4. Allows access to the VPM Menu. This sub-menu is password protected. Only authorized Program auditors are allowed into this sub-menu.
5. Allows access to the Manufacturer Service Menu. This sub-menu is password protected. Only authorized EIS manufacturer technicians are allowed into this sub-menu.
6. Is the EIS view/print manual menu. This contains the complete Users Manual for the EIS.
7. Shuts down the system.

EIS Log-on Procedure and Initial Data Entry

After the computerized EIS has been turned on and is ready to accept data, the Air Care Inspector should "log on", by using the inspector's personal identification number, and enter the vehicle data as prompted. The following information will be requested and should be entered:

(a) Inspector Personal Identification Number
(b) Vehicle Identification (VIN)
(c) Vehicle License Number
(d) Vehicle Make – Use the applicable four-letter abbreviation from the list provided on the EIS help screen; for vehicles not listed on the help screen, use the first four letters of the manufacturer's name.
(e) Vehicle Model Year
(f) Vehicle Type – Car or Truck, (recreation vehicles, vans, four wheel drives shall be entered as a truck)
(g) Gross Vehicle Weight Rating (GVWR) – for trucks only
(h) Number of cylinders – 2R for Rotary; #D for direct ignition systems where # is the number of cylinders.
(i) Odometer Reading
(j) Test Type – Initial test after repairs (retest selected if tested at ANY VPMD approved Air Care Station before 90 days elapses). If the test is a retest, the EIS will request additional information regarding the type and cost of the repairs, if known.
(k) Single/dual exhaust
(l) Other information deemed necessary by the Division

Emissions Inspection Menu

1. See Figure 9 Allows an Official I/M Test to be performed by Air Care Inspectors authorized by VPM. An Inspector number and password are required.
2. Allows access to the Analyzer Maintenance Menu. See Figure 8.
3. Allows access to the Manual Test Mode. This test mode displays HC, CO, CO_2 and O_2. There is also an RPM display.
4. Allows previous inspection reports (VIRs) to be reprinted.
5. Returns to the previous menu.

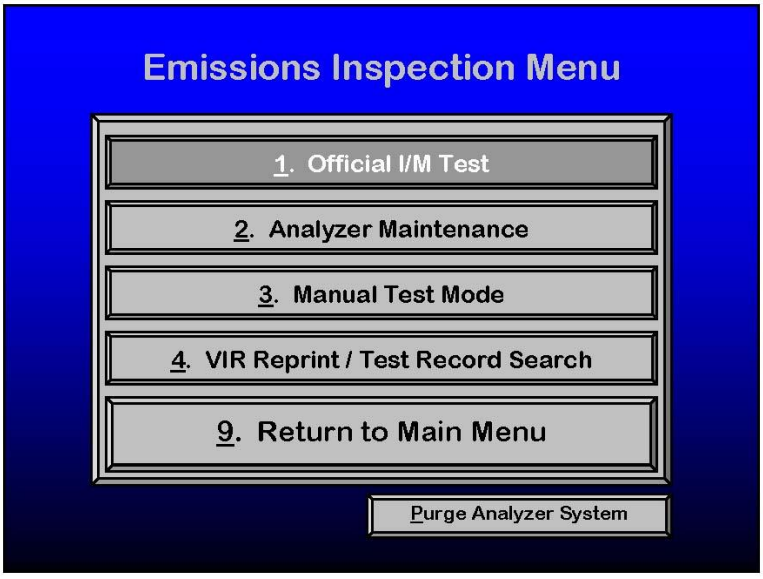


Figure 9 Emissions Inspection Menu

Station Menu

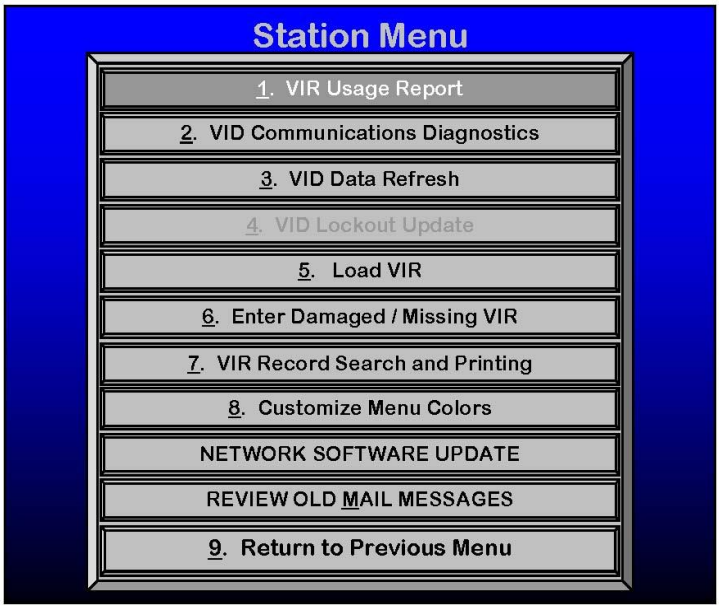


Figure 10 Station Menu

1. See Figure 10, this menu allows access to the VIR usage database and can track VIR usage for up to 91 days by entering a date range. This data includes the date, VIR number and vehicle VIN number.
2. Allows access to diagnostic tool for testing modem and VID connection. Performs a data file refresh. In this feature, the analyzer calls up and synchronizes itself with the central database (VID).
3. Instructs the EIS to conduct a VID data refresh via the internet.
4. Not used
5. Allows access to enter first and last serial numbers of purchased VIRs.
6. Allows access to reporting damaged or missing VIR numbers.
7. Allows previous inspection reports (VIR) to be re-printed.
8. Customizes/resets menu colors.
   a) Network Software Update - Performs a manufacturer software update using the Modem/Network.
   b) Review Old Mail Messages - Allows access to mail messages previously displayed after a data file refresh. Allows technical service bulletins and announcements to be retrieved for displaying on screen and printing.
9. Returns to the previous menu.

VID Diagnostic Functions Menu

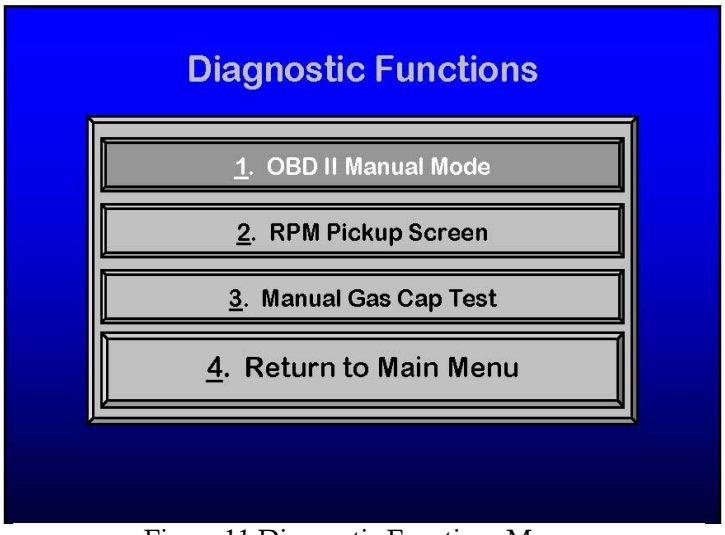


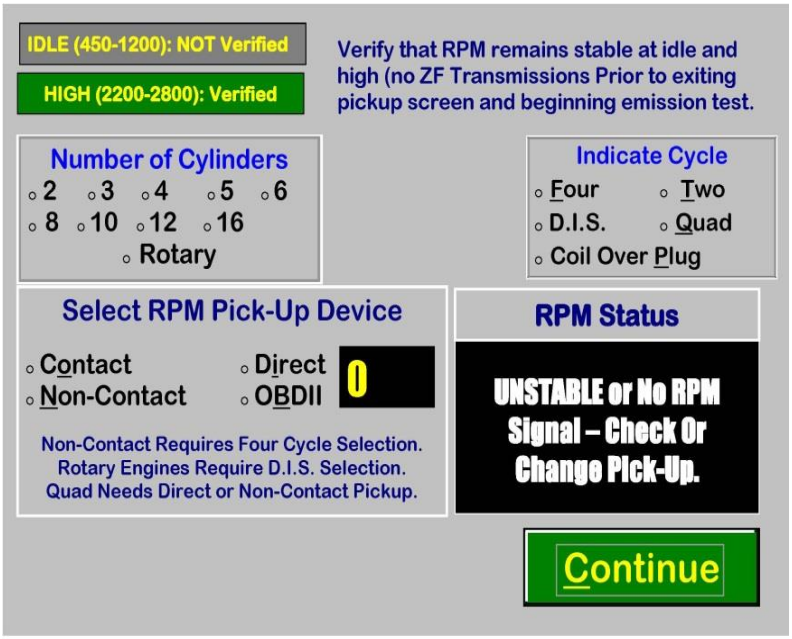
Figure 11 Diagnostic Functions Menu

1. Figure 11. Allows access for manually connecting to an OBDII Equipped vehicle. Data Available depends on the connected vehicle which can include displaying fault codes, resetting fault codes, readiness indicators, O_2 sensor data stream and fuel system data stream.
2. Allows access for connecting an RPM pick-up to a vehicle.
3. Allows access to the gas cap test outside of an Official I/M Test
4. Returns to previous menu.

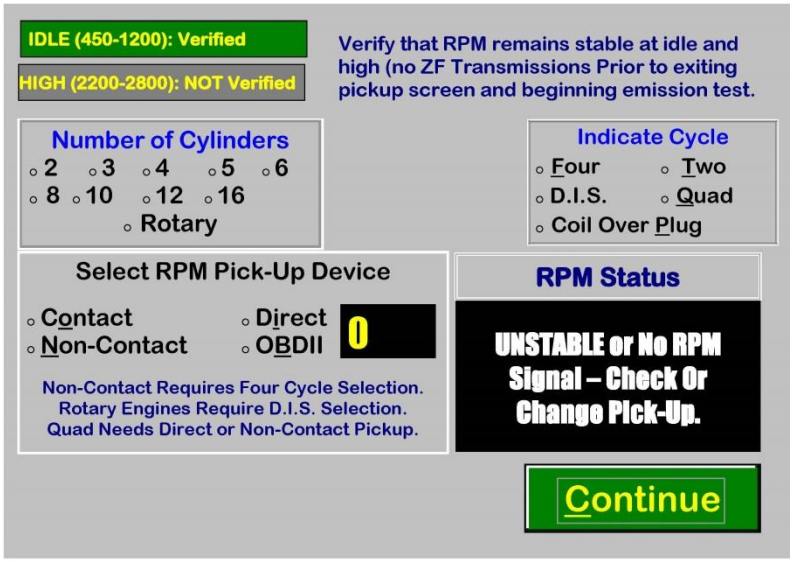
RPM Set-Up Screen

These screens (see Figures 12 and 13, this page) are examples of the menus that will aid you in choosing and setting up a RPM pick-up device. Read this display and become familiar with its functions before continuing with vehicle inspections. Validate the engine RPM at either the 450 to 1200 RPM or 2200-2800 RPM with the stable RPM function in the upper left corner before attempting to continue.

Following the visual inspection, the EIS will prompt the inspector to proceed with the visible smoke portion on the two-speed tailpipe test only.



Figures 12 RPM Set-Up Screen



Figures 13 RMP Set-Up Screen

6.6 Visible Emissions

The presence of tailpipe smoke anytime during the emission test results in a 'Fail' test.
Visible smoke often indicates major engine problems and the need for repairs.
No vehicle shall be failed for water vapor condensation or steam.

Gasoline vehicles requiring an emissions inspection must be checked for visible smoke. This portion of the inspection can be accomplished with either the OBDII or the traditional tailpipe test but there is no 10 second engine rev-up for the OBDII test. In either case the EIS will be used to document your observation on the VIR.

Model years 1996 or newer will utilize the automated OBDII procedure where the EIS will conduct an emission test via the vehicle's computer. Certain 1996 and 1997 model years which are OBDII incompatible will default to the two speed emissions test format as programmed into the EIS. The inspector will utilize an RPM pickup and a tailpipe probe to evaluate the emission levels generated by the vehicle during a two speed test, similar to that of 1995 and older vehicles but with more restrictive cutpoints.

The Air Care Inspector will watch the tailpipe as the vehicle enters the facility; during the idle portion of the emissions test; and during the high-speed portion of the emissions test (using a properly positioned mirror). If the inspector observes **any smoke** (not steam) during any part of the inspection, the visible portion of the emissions test shall be a FAIL and will be entered as FAIL when prompted by the EIS.

Preconditioned Two-Speed Idle Emissions Test

Pre-testing a vehicle to see if it will pass the emissions test is prohibited and may result in the revocation of an inspector's certificate.

The Program approved EIS will provide a series of automatic prompts which will direct the Air Care Inspector on how to proceed through the two speed test. The conditions and procedures for performing the Visible Smoke Test for these vehicles, and recording the results, shall be as follows:

General Test Procedures:
The EIS will prompt the Air Care Inspector to start the emissions test. The EIS will display a visual message on the screen, such as: "*Connect the tachometer probe (red One) with the engine turned off. Start the engine and insert the analyzer probe into the vehicles tailpipe*." Inspectors should ensure that the EIS probe is properly inserted into the tailpipe, and that there are no "kinks" in the hose. In the case of a vehicle that employs a spark arrestor on the tail pipe, a slim probe tip should be used in place of the standard tip. For vehicles with dual exhaust systems, the dual probe adaptor shall be employed. Inspectors should begin the emissions test immediately after the engine has been restarted.

Specific Test Procedures:
- High Speed Test - Depress the accelerator pedal for ten (10) seconds holding the engine speed to between 2,200 and 2,800 RPM and observe the vehicle's tailpipe(s) for visible emissions. When the timer expires allow the engine to return to an idle.
- Idle Test - Observe the tailpipe exhaust plume of the vehicle for another 10 seconds. At the conclusion of the 10 seconds, the inspector will be asked "did you observe any visible emissions at the tailpipe(s)?"
- Should the inspector enter a "Y" for "Yes" on visible emissions observed, the test will continue with a Fail result based on visible emissions and may show a fail for excessive HC as well. Should the inspector enter an "N" for "No" visible emissions, then other factors in the test will determine the Pass/Fail result of the test.

6.7 Gas Cap Evaluation

As prompted by EIS, the Air Care Inspector must perform the fuel cap integrity test on all vehicles equipped with an evaporative emission control system. **Inspectors should consult the gas cap adaptor guide to determine the appropriate gas cap adaptor to be used in the test.** Notice: be aware, some vehicles may not have gas caps that can be tested by the tester. If no adaptor is available, the inspector shall enter "No" for "is there an adaptor available to fit this cap?" Be advised that less than 1% of vehicles subject to testing do not have available adaptors. In recent years, VPMD has revoked the certifications of several inspectors who decided to save time and shortcut the test by falsely entering "No" when adaptors were clearly available.

Visual Inspection of the Gas Cap

When prompted by the EIS, inspect the gas cap(s) for proper fit and installation. The EIS will ask

- is the gas cap missing or defective?
- is the gas cap the correct cap for the vehicle?
- is there an adaptor that will fit the cap?
- is there a second gas cap to be tested? This question will be prompted at the conclusion of the first gas cap test.

Responses are either Yes or No. Notice – if multiple gas tanks are present that are plumbed to the engine and have filler necks, the gas caps for these tanks must be tested if required. Always test the primary gas tank cap first.

Following the EIS and cap tester prompts, attach the fuel cap(s) to the adaptor and perform the test. The test results are automatically captured by the EIS. If no adaptor is available from the tester manufacturer (for the vehicle being tested), enter "No adaptor available" as prompted by the EIS.

Color Code	Description
Blue	1 3/8" Shallow cam adaptor
Yellow	1 3/8" Deep cam adaptor
Red	1 ½" Shallow cam adaptor
Green	1 ½" Deep cam adaptor
Black	1 ½" Shallow cam ~ Honda adaptor
Gray	1 3/8" Shallow cam ~ Nissan adaptor
Black	Threaded adaptor that comes attached to tester
Green Cap	"Pass" calibration cap
Red Cap	"Fail" calibration cap
Orange	1/8th turn adaptor
Light Blue	GM Quick-on adaptor
Tan	Chrysler Quick-on adaptor
Light Green	Nissan and Toyota threaded caps (short threads)
Pink	BMW, Mercedes, Audi
Cream	Hyundai quick-on adaptor

Failure to verify the availability of an appropriate gas cap adaptor may result in an enforcement action.

Table 4.0 Gas Cap Adaptors

6.8 Vehicle Inspection Report (VIR) Interpretation and Distribution

The EIS will produce a printout of the Vehicle Inspection Report (VIR).

In the event of a PASS test, the customer shall be given the VIR with the certificate middle portion attached to be provided to the New Mexico Motor Vehicle Division (MVD) upon registration.

- The Air Care Inspector shall **retain** the bottom – Station Copy in the inspection station files for purposes of auditing and record keeping.

When the result is FAIL the station shall provide ONLY the VIR (upper portion) to the customer. The Station is to detach and retain the "blacked out" middle portion with the attached lower portion station copy for auditing and record keeping. See Figure 14.

VIRs are printed in numerical order and shall include:

(a) Sequential Certificate Number
(b) Air Care Station Identification Number
(c) Air Care Inspector Identification Number
(d) Vehicle Information
(e) Visual Inspection Results
(f) OBDII or exhaust analysis Test Results
(g) Overall Test Results, i.e., Pass, Fail

The Air Care Inspector shall sign the certificate and station copy at the conclusion of the test regardless of the pass/fail result of the test. FAILURE TO sign the test is a violation.

Vehicle FAILED

If the word "FAILED" appears on the VIR, the center certificate portion will be blacked out indicating that the vehicle has failed the test and repairs and/or adjustments are required.

- The Air Care Inspector of an IS – Inspection Only Station may advise the customer of failed items only.
- The Air Care Inspector of an IR – Inspection Repair Station may advise specific repairs and adjustments, and, if known, the repairs and/or adjustments which may be required to pass a retest.

The customer may not use the FAILED VIR for MVD vehicle registration. The Air Care Station shall retain the bottom portion of the VIR.

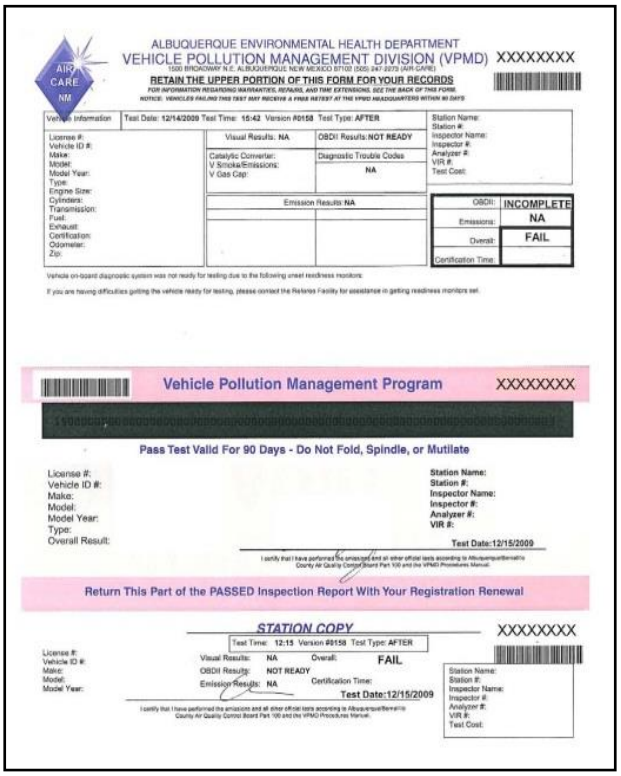


Figure 14 FAILED Emission Inspection VIR

The Air Care Inspector shall inform the customer that the necessary repairs and/or adjustments and subsequent retest must be completed prior to re-registration of the vehicle or MVD penalties will accrue. The customer may go to any Air Care Station for a retest. The Air Care Inspector shall inform the customer that **one free retest is available at VPMD** upon presentation of the FAILED VIR within 90 days of the test. The Air Care Inspector may inform the customer that under certain strictly-limited circumstances a time extension may be granted by the VPMD Program Manager.

INVALID or ABORTED Vehicle Test

Invalid or aborted results may not constitute a complete emissions test. Air Care Inspectors and Stations shall contact VPM Headquarters for guidance in this matter. They **may not charge** customers for ABORTED or INVALID tests. If a numbered official VIR is generated as a result of the emissions test, the Air Care Station may charge the customer for the test.

MISPRINTED VIRs

The Air Care Station shall keep **both copies** of these INVALID VIRs for future credits. If the INVALID is caused by engine or exhaust system problems, the Air Care Inspector shall advise the motorist to make the necessary repairs before attempting another inspection.

FAILED Vehicle Retest

Vehicles that are being retested after required repairs and/or adjustments have been made shall have a complete inspection, including the two part emissions test. (Inspector must enter this as a "retest") Customers must notify the Air Care Inspector that it is a retest and should present to the Air Care Station the initial VIR received at the initial inspection in order to facilitate vehicle, customer, and Air Care Inspector identification. Vehicles which have failed inspection or which have other problems may be taken to the VPM headquarters, where vehicle owners must present the initial VIR they received.

Vehicle PASSED on RETEST

If the word "PASSED" appears in the retest VIR section labeled "Certificate of Inspection," the vehicle has successfully passed the retest. No additional repairs are required and the customer is now eligible to receive his or her vehicle registration form MVD. The customer should be informed that the bottom half of the VIR should be presented or mailed to the MVD when the subject vehicle is being registered.

Vehicle FAILED on RETEST

If the word "FAILED" appears on the retest VIR, the vehicle has failed the retest. The customer is still ineligible to register his or her vehicle, and must take necessary steps to bring the vehicle into compliance.

Generic VIR Operational Issues

Air Care Inspectors or Station Managers should contact VPM Headquarters in the event of system malfunctions or printing problems.

Second Call

Second Call is the process of transmitting emission data up to the Worldwide Vehicle Information Database (WVID) immediately upon completion of an emission test.

Implementation of Second Call on all Air Care Station analyzers allows the public to register their vehicle immediately upon completion of a *passed* emission test via the MVD website or MVD Interactive Voice Recognition System. Registration renewals no longer have to be mailed in nor does the public have to stand in line at a MVD office for renewal if the mail-in deadline was exceeded or if the emissions test is still valid for a 2 year period. This is a tremendous convenience and time saver for the public.

Second Call benefits the VPM Program by allowing staff to have near-real time access to test information via the WVID, and also benefits the MVD registration process by closing a loophole in the online registration process that allowed the public to enter false emission test data for failed tests.

7. EIS Maintenance

1. Daily Start-Up may involve 3-day calibration procedure, daily leak checks, gas-cap calibration, and communications checks via the Analyzer Maintenance Menu. Air Care Inspectors and Station owners/managers are responsible for properly maintaining the EIS for proper operation and emission measurements. Materials and supplies shall include:
    a. A full extra high gas bottle
    b. A full extra low gas bottle
    c. Two new spare flex probes
    d. Narrow gauge exhaust probe for spark arrestor exhaust
    e. 2 Leak check caps
    f. 6 Spare filters for sample probe
    g. Extra ream of Copy paper for printer.
    h. Up to date Gas cap application guide
    i. Gas Cap Adapter set (12 various colored to date including: updated Tan with grey ring and Orange with grey ring, cream, yellow, grey, threaded green, green, dark blue, light blue, red, black , pink, and 1 red fail cap 1 green pass cap.)
    j. Current Motors or Alldata Application manuals, (or electronic media with knowledge of operation of the same.)
    k. Mirror mounted for smoking vehicle exhaust observation

Use only approved manufacturer parts to maintain the warranty of the equipment. Refer to the equipment maintenance manuals for more information.

Item/Part	Servicing	Frequency
Water/Air Filter Bowls	Evaluate on a regular schedule. Use non-alcohol, oil-free cleaners. See Fig. 15	After every filter replacement
Dry Side Paper Filter	Only replace with manufacturer's provided parts when the filter becomes discolored or grey. If the EIS indicates low flow during a vehicle emissions test or hydrocarbon hang-up test fails, check the filter. See Fig. 17	Inspect weekly or during the 3-day calibration.
Sample Probe	Check for restricted tip. See Fig. 16	Daily
Sample Hose	Check for kinks/holes; use only shop air (less than 60 psi) to clean hose and probe. See Fig. 16	Weekly or when low-flow or dilution problems persist
EIS	Clean monitor, keyboard and mouse with a soft cloth and chemical free, non-abrasive cleaner.	When dirty

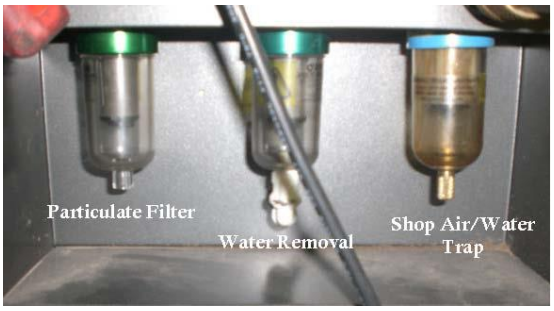


Figure 15 EIS Filter Drawer

Figure 16 New/Old Probes

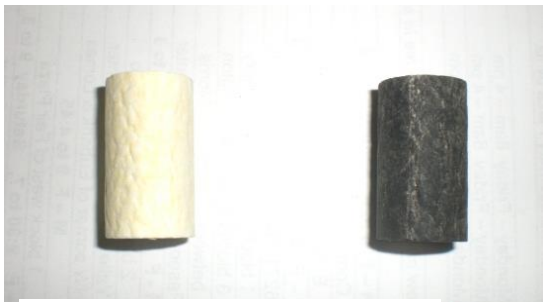


Figure 17 Clean/Dirty Filter

Verify that you are using the correct values on the blend code, as values vary with bottle change. See Figure 18.

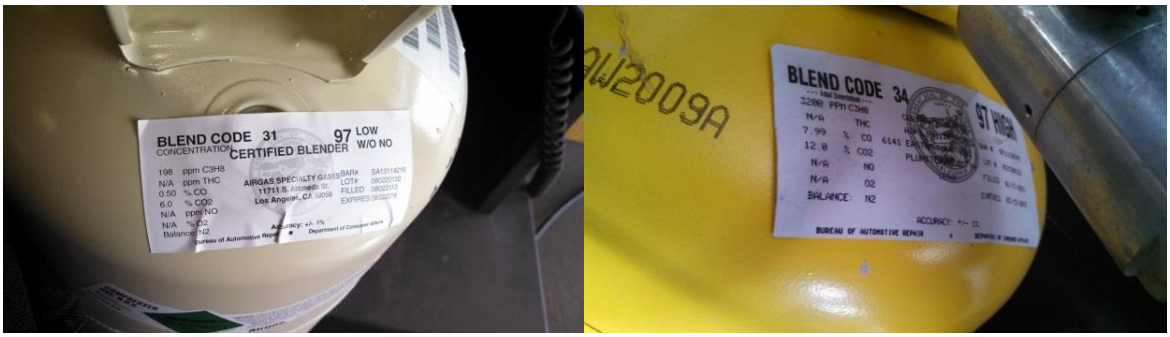


Figure 18 Blend Codes

EIS Station Requirements:

- Air Compressor capable of producing 90psi
- Dedicated phone line, network preffered
- Dedicated 120v electrical outlet

Station Signage Requirements:

An official Air Care sign supplied at VPMD with price, and testing hours posted visible from the public street. A smaller,17inch by 11 inch, official VPMD poster in cashier waiting area with total price posted, no supplies, waste or environmental charges should be charged to emission tests. Current VPMD Station and Inspector certification must be displayed in customer viewing area.

7.1 Analyzer Maintenance Menu

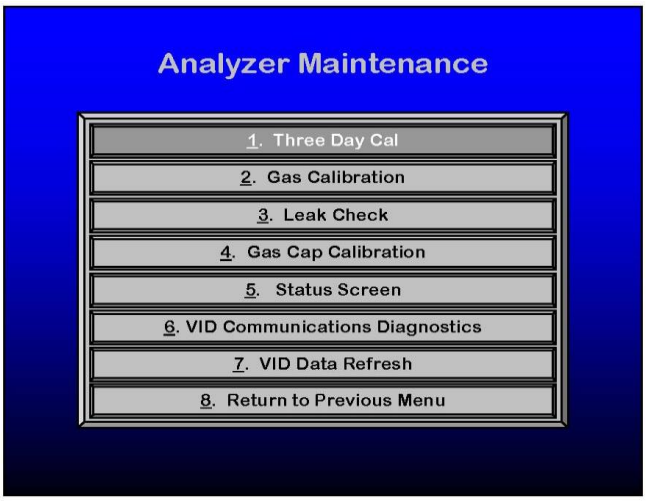


Figure 19 Analyzer Maintenance

This menu begins the instrument calibration that is required to keep the EIS functional in order to perform accurate emissions tests. See Figure 19.

1) Allows an analyzer gas calibration, leak check and gas cap calibration to be performed. This combines gas bench calibration, leak check, and gas cap calibration into one selection.

2) Allows only an analyzer gas calibration to be performed. The calibration process is integrated with a zero air check, low concentration standard blend, and a high concentration blend. This test is performed every three (3) days.

3) Allows only a leak check to be performed. This is a daily requirement.

4) Allows only a gas cap calibration to be performed. This is a daily requirement.

5) Allows access to the system's status screen. **This screen is intended for use by Inspection/Repair Air Care Stations only.**

6) Allow access to the central database (VID) communications diagnostics which assists in diagnosing communications problems.

7) Allow access to the VID data file refresh. In this feature, the analyzer calls up and synchronizes itself with the central database. This is an automated process that occurs on a weekly basis.

8) Returns to the previous menu

Refill VIR/Paper Drawer

VIRs are loaded face down; load the bottom edge first into paper tray. See Figure 20.

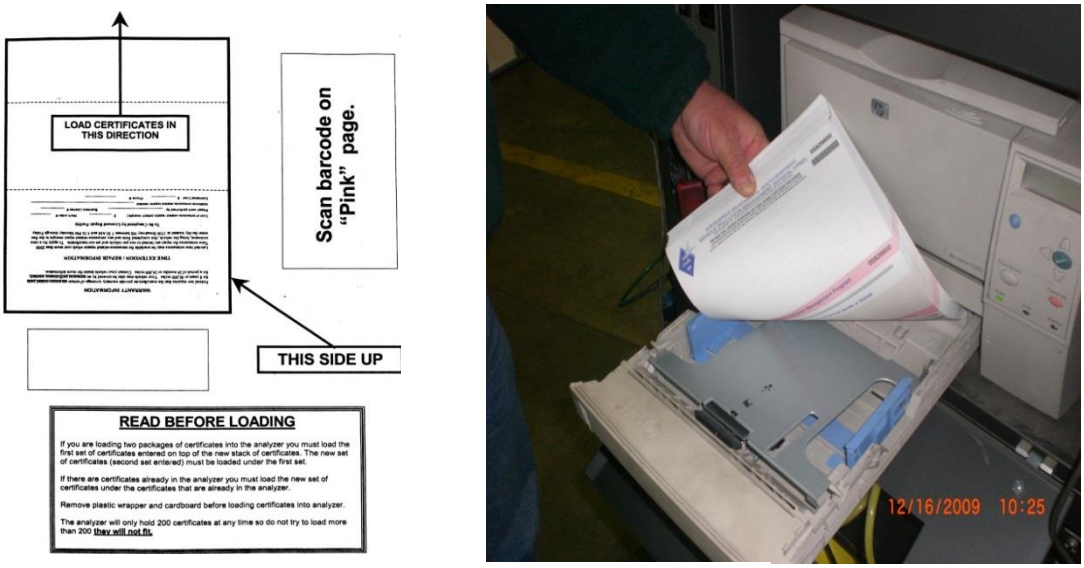
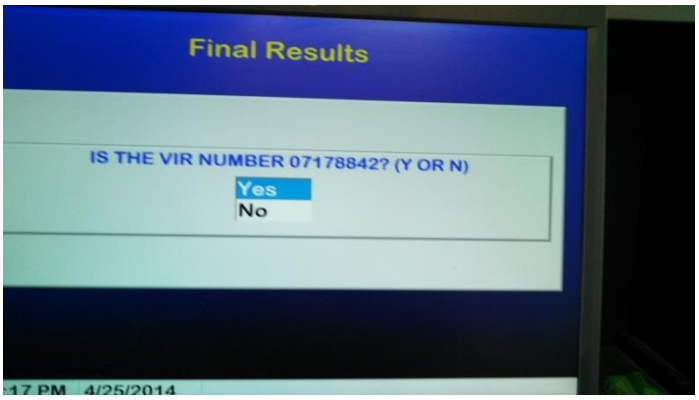


Figure 20 VIR Loading

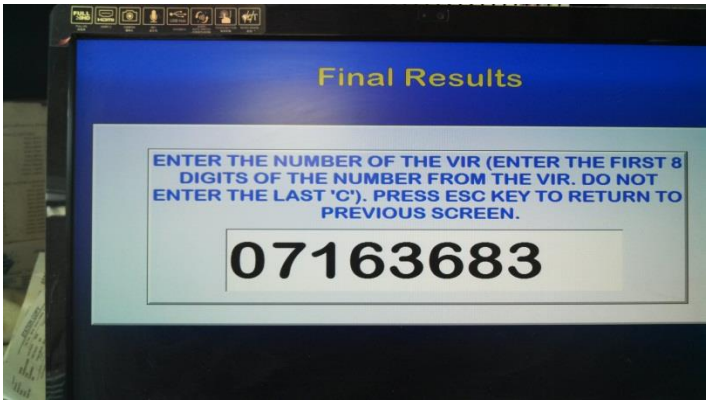
8 Correcting VIR Number Sequence:

1. Is the VIR number XXXXXXXXX (Y or N)



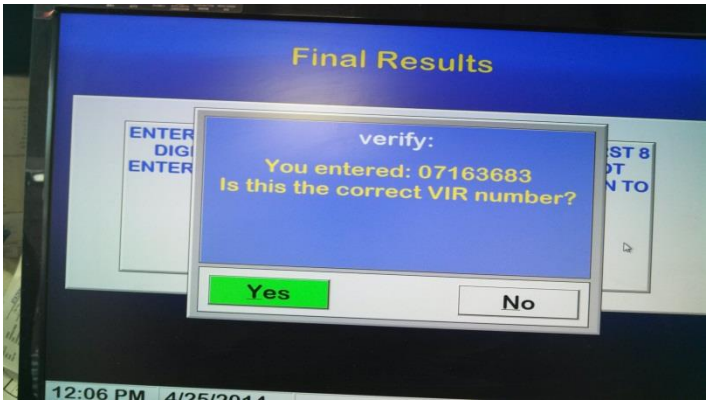
2. Select no and enter

3. The EIS will prompt to enter the number from thr VIR that printed



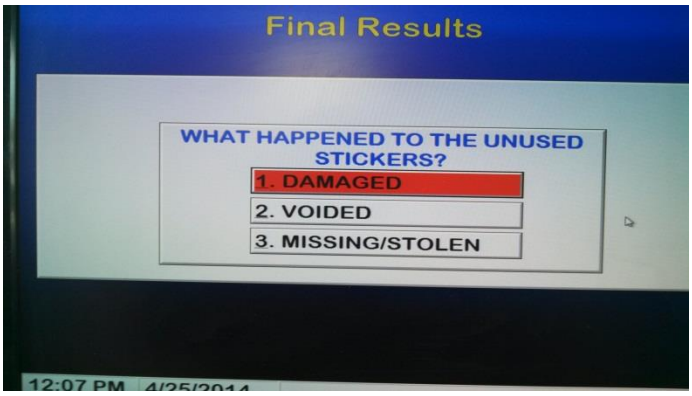
4. Enter the VIR number XXXXXXXX

5. The EIS will ask to verify that this is number that <u>was</u> printed.



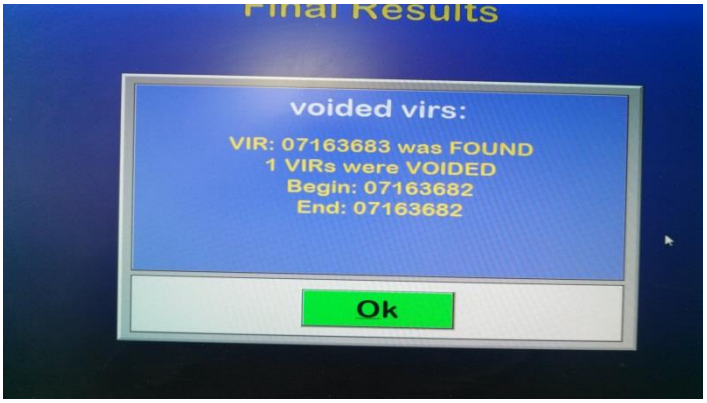
6. Enter yes or no as appropriate

7. The EIS will ask what happened to the unused stickers (VIR)

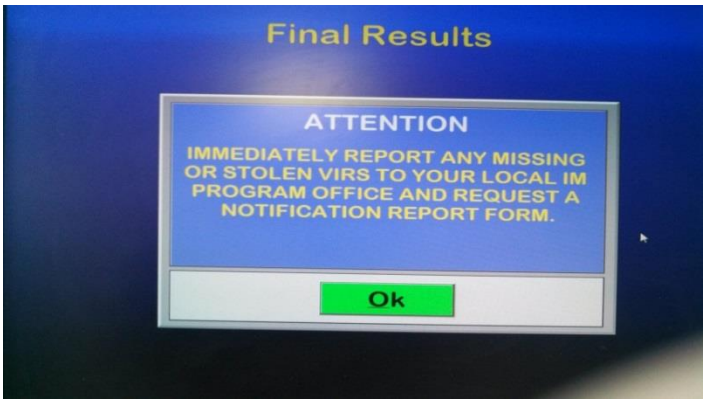


8. Select appropriate answer Damaged Voided or Missing/ Stolen

9. EIS will show that printed VIR was found and determine how many VIRs are missing. Select OK enter



10. EIS will prompt to report any missing VIRS to VPMD and request a notification form. Select OK.



11. EIS will reprint VIR for customer use, and continue prompt Was the VIR printed properly?

12. Your VIR numbering should now be correct.
13. Void first VIR with improper number discovered and deliver corrected signed VIR to customer
14. Sign and void wrongly numbered VIR and file

9. Enforcement/Compliance - Air Care Inspectors

A determination of non-compliance will be given to any Air Care Inspector if any of the following actions occur:

- Violating any or all of the official rules and regulations applicable to Air Care Inspectors as outlined in 20.11.100 NMAC.
- Negligence, which may include failing to take corrective action or safeguards as required by the Program.
- Fraudulent activities, including adjusting or repairing a motor vehicle in a manner which would cause it to FAIL an inspection test when it should PASS or PASS when it should FAIL; entering false data in to an approved EIS; inducing a customer to authorize repairs at the Air Care Inspector's place of business through willful misrepresentation of emissions inspection requirements; performing repairs purporting to be essential to emissions requirements but which are unrelated to the emissions inspection result; or otherwise intentionally deceiving or misleading the public or attempting to subvert the Program data.

To ensure that Air Care Stations and Inspectors are upholding the standards established for this Program, auditors from VPM Headquarters will perform scheduled audits, as well as unscheduled, unannounced inspections, as required by the Program Manager, to observe the performance of Air Care Stations and Inspectors.

The auditors will also investigate alleged violations and public complaints filed against Air Care Stations and Inspectors will report their findings to the Program Manager. If it is discovered that violations have occurred as a result of a misunderstanding of the Program's rules and regulations, the VPM Program shall take corrective or enforcement actions and may require retraining/retesting of Air Care Inspectors. If, however, it is determined that violations occurred, then the Program Manager shall officially inform the Air Care Inspector of the violations and pending disciplinary action.

Such disciplinary action may include monetary penalties, and suspension of certification for a length of time deemed appropriate by the VPM Program. Any such suspension will bar the inspector from participating directly or indirectly in any Air Care inspection activities. The Program Manager may decide to suspend or revoke certification if a review of the complaints, audits and investigation indicate such action is warranted, or if the station or inspector has had certification previously suspended or revoked.

Categories of Violations and Infractions

Three general categories of infractions have been identified by the VPM Program. These categories have been assigned point values and are tracked by computer for each Air Care Station and Inspector. These categories are described below, and a list of examples in each category is provided. These lists are not all-inclusive, and the Program will add specific infractions to these lists in the future.

A total of 16 points within any consecutive twelve (12) month period, assigned against an individual or station, may result in suspension or revocation of certification.

Intentional Violations

An intentional violation is a violation that is the result of actions that are reckless, deliberate or purposeful or that occur when the person who committed the act or omission knew or should have known the conduct was a violation of 20.11.100 NMAC.

Each intentional violation may result in issuance of up to 16 points for each occurrence, and a suspension or revocation notice of Program certification, as appropriate, for the Air Care Station and Inspection at which the infractions occurred. The Air Car Station and Inspector are subject to monetary penalties equal to 2.5 times the estimated cost of repair of the vehicle if the intentional violation results in a false PASS. If the intentional violation results in a false FAIL a monetary penalty of up to $1,000 may be assessed. In addition to suspension or revocation of certification and monetary penalties, cases involving an intentional violation could be referred to the Attorney General, District Attorney or City Attorney, as appropriate, for further investigation of fraudulent acts or other acts contrary to law.

Intentional violations like Clean Scanning: using a vehicle which passes the OBD II test to fraudulently pass a different vehicle.
THIS PRACTICE IS EASILY DETECTABLE BY VPMD AND WILL RESULT IN ENFORCEMENT ACTION.

Examples of Intentional Violations (not all inclusive):.

- Pretesting
- Performing an emissions inspection without physically examining the vehicle for emissions equipment
- Allowing a non-certified inspector to perform an inspection
- Adjusting a vehicle to be in Program non-compliance **after** it has passed an inspection
- Adjusting a vehicle during the test
- Guaranteeing test to PASS prior to testing the vehicle
- Clean scanning
- Using another vehicle tailpipe to read tailpipe emissions
- Pulling a plug wire to assure a FAIL
- Accepting cash for a "guaranteed" PASS
- Purchasing and/or using VIRs from sources other than the VPM Program Headquarters
- Temporarily replacing emission control devices.

Serious Violations

Serious violations are actions that occur as a result of inspector error, which includes an omission, and are likely to result in inaccurate test results.. Serious violations will be assessed four (4) points each. Serious violations will require the station to refund the test fee and provide a free retest to the motorist. Serious violations may also result in mandatory conferences at the Program Headquarters to discuss the violation and means of assuring no future repetitions of the problem. The results of the conference will be documented and may include commitments to complete additional training. The Program may agree to vacate points if such commitments are completed successfully and on a timely manner. Mandatory conferences will be scheduled and held at the Program Headquarters.

Examples of serious violations (not all inclusive):

- Wrong gross vehicle weight on trucks
- Wrong exhaust system identified
- Missed item on the visual inspection, either missing or present
- Charging for an invalid test
- Unauthorized use of the Air Care TRADEMARK
- Improper storage and handling of VIRs, Customer Consent Forms and Data Entry Forms
- Not appearing for mandatory conferences
- Refusing to perform inspections for other than safety reasons
- Not retaining bottom portion of FAIL VIR
- Not posting official signs properly
- Improperly warmed up vehicle
- Identifying the test incorrectly (Initial vs. Retest)
- Lacking the required materials
- Not entering proper repair costs for retests
- Not posting fee charged for inspection

Minor Violations

Minor violations are common errors which can be prevented by diligence and care. Each minor violation will be assessed two (2) points. Minor violations will result in formal written notices of violation.

Examples of minor violations (not all inclusive):

- Wrong vehicle identification number
- Not signing VIRs
- Not prompting the EIS properly

Assignment of Points

Violations and points will be assessed against the Air Care Stations, the Air Care Inspectors or both. Violations committed during the inspection are the inspector's responsibility. Program violations, such as allowing or requiring an inspector to perform an improper test or allowing a non-certified individual to perform part or all of a test; improper filing and storage of Program documents, or improperly posted signs will be assessed against the station.

Air Care Stations may be held responsible for their inspectors' actions if evidence establishes that the inspector violations occurred due to lack of diligence or supervision by the Air Care Station owner/operator.

Patterns of Violations

When errors continue to occur; the level of enforcement increases. More severe penalties also may be imposed as a result of an Air Care Station or Inspector committing continuing errors. Points will accumulate over a period of any consecutive twelve months.

The consequences of cumulative points are as follows:

2 POINTS = Formal written Notice of Violation
12 POINTS = Mandatory conference, possible suspension or voluntary Settlement Agreement
16 POINTS = Notice of Intent to Suspend or Revoke

In cases of suspension, the Program Manager may consider reinstatement following a showing of affirmative corrective measures agreed to by the QA Supervisor and the Air Care Station or Inspector.

Appeals

Notices of Violation and other decisions of Program Quality Assurance Specialist (Auditors) may be appealed to the Program Manager. The appeal must be delivered in writing to the Headquarters within ten (10) calendar days of the receipt by the Air Care Station and Inspector of the decision or the Notice of Violation. Decisions of the Program Manager may be appealed as outlined in 20.11.100 NMAC.

Conferences and Settlement Agreements

At any time during an administrative hearing process, or as a result of a conference with the Program Manager or his or her designee, and Air Care Station or Inspector may enter into a written agreement with the Program Manager to resolve pending issues. Terms of an agreement may include, but are not limited to requiring an Air Care Station or Inspector to reimburse a motorist for repairs made to a vehicle as a result of a false PASS or false FAIL; monetary penalties; probationary periods and conditions; and suspension of certification for a specified period of time.

Administrative Hearings/Procedures

Air Care Inspectors or the owner/operators of Air Care Stations may appeal a pending monetary penalty, certification suspension or revocation to the Program Manager.

- Based on evidence and investigations during station audits, retests performed at VPMD Headquarters, or customer complaints, the Program Manager may impose monetary penalties, or revoke or suspend certification upon notice.
- An individual may request a hearing, in writing, before the Program Manager, within fifteen (15) days of receipt of the suspension or revocation notice.
- The Program Manager shall set a date, time, and place for the hearing. The hearing shall be convened no more than 60 days after receipt of the request for hearing.
- No fewer than fifteen (15) consecutive days before the hearing, the Program Manager shall inform the charged party of the date, time, and place of the hearing.
- The Program Manager may appoint a hearing officer to hear the case and make recommendations to the Program Manager.
- At the hearing, the individual may demonstrate why the certification should not be suspended or revoked, no penalty should be assessed or the proposed decision should be modified.

Based on evidence produced by the VPM Headquarters investigation, and on the findings of the hearing, the Program Manager may dismiss the charges; affirm, reduce, increase or waive the proposed monetary penalty; suspend or revoke the certification; or otherwise modify the proposed decision. If the Program Manager has recommended suitable compensation for any damages resulting from an alleged violation, and the individual(s) or station(s) against whom the action is being taken have compensated accordingly, such fact shall be given due consideration. In determining a course of action, the Program Manager may take into account past violations and disciplinary measures taken against the station or individual.

Any individual whose monetary penalty is affirmed or whose certification is suspended or revoked may appeal the Program Manager's decision to the Board. The Board shall follow the procedures identified in 20.11.81 NMAC for an appeal. The appellant must deliver a written request to the Program Headquarters within (15) consecutive days after receipt of the Program Manager's decision. Based upon the record, the Board may choose to uphold or overturn the Program Manager's decision, or convene a hearing de novo. If the Board decides to convene a hearing de novo, the Board may appoint a hearing officer, and the Board shall set a date, time and place, of the hearing and shall hold the hearing within ninety (90) days of the Board's receipt of the written request. The Board shall inform the appellant of the date, time, and place no fewer than 15 consecutive days before the hearing. The decision of the Board shall be final.

If a matter is on appeal before the Board, and the appeal is dismissed as a result of the parties entering into a written agreement, the Board will be informed of the terms agreed upon.

10. Definitions

Air Care inspection station means a private business authorized by certificate in accordance with 20.11.100.18 NMAC to inspect motor vehicles and issue certificates of inspection. It also means stations established by the city of Albuquerque and Bernalillo county, or other governmental entities for testing government owned or leased motor vehicles.

Air Care inspector means an individual authorized by a certificate issued by the program to perform inspections of motor vehicles and who has met the requirements of 20.11.100.21 NMAC.

Air Care Station means both an Air Care inspection station and a fleet Air Care Station.

Biennial means every other year.

Chassis means the complete motor vehicle, including standard factory equipment, exclusive of the body and cab.

City means the city of Albuquerque, a New Mexico municipal corporation.

County means the county of Bernalillo, a political subdivision of the state of New Mexico.

Dealer means any person who sells or solicits or advertises the sale of new or used motor vehicles subject to registration in the state of New Mexico and as further defined in the Motor Vehicle Code Chapter 66, NMSA 1978.

Distributor means any person who distributes or sells new or used motor vehicles to dealers and who is not a manufacturer.

Division or VPMD means the vehicle pollution management division of the city environmental health department, which provides the staff for the Albuquerque-Bernalillo county vehicle pollution management program.

Driver means every person who drives or is in actual physical control of a motor vehicle upon a highway or upon property used for inspections.

Essential parts means all integral and body parts of a vehicle of a type required to be registered under the Motor Vehicle Code, the removal, alteration or substitution of which would tend to conceal the identity of the vehicle or substantially alter its appearance, model type or mode of operation.

Exhaust emissions means CO, HC and all other substances emitted through a motor vehicle's exhaust system, after passing downstream of the engine block exhaust ports and exhaust emissions control devices, if any.

Exhaust emission control device means equipment designed by the manufacturer of the vehicle and installed on a motor vehicle for the purpose of reducing pollutants emitted from the vehicle, or a system or engine modification designed by the manufacturer of the motor vehicle which causes a reduction of pollutants emitted from the vehicle, or equipment designed by the vehicle manufacturer to prevent damage to or tampering with other exhaust emission control devices.

Fast idle condition or unloaded 2500 rpm means an exhaust emissions inspection conducted with the engine of the vehicle running under an accelerated condition as required by 40 CFR Part 51.

Field audit gas means a gas mixture with known concentrations of CO2, CO, and HC that is used by the program to check the accuracy of exhaust gas analyzers used by authorized inspection stations.

Fleet Air Care Station means any person, business, government entity, firm, partnership or corporation which provides for the construction, equipping, maintaining, staffing, managing and operation of authorized inspection station for the sole purpose of inspecting its private fleet of motor vehicles subject to this part, and not offering inspection services to its employees or the general public.

Fuel means any material that is burned by the engine of a vehicle in order to propel the vehicle.

Gross vehicle weight means the weight of a vehicle without load, plus the weight of any load thereon.

Government vehicle means a motor vehicle exempt from the payment of a registration fee and owned or leased by any federal, state, local, or other governmental entity.

Headquarters means the main office of the vehicle pollution management program.

Highway means every way or place generally open to the use of the public as a matter of right for the purpose of vehicular travel, even though it may be temporarily closed or restricted for the purpose of construction, maintenance, repair or reconstruction.

Idle mode test means an unloaded exhaust emissions test conducted only at the idle condition, as described in the VPMP procedures manual.

Inspection or re-inspection or test means the mandatory vehicular anti-tampering and emissions inspection conducted both visually and with equipment or chemical sensing devices as required by this Part.

Low emissions tune-up means adjustments and repairs, which can reduce motor vehicle emissions including but not limited to the following procedures:
(1) checking and setting to manufacturer's specifications, the idle mixture, idle speed, ignition timing and dwell, and
(2) checking for proper connection of vacuum lines, electrical wires, and for proper operation of pollution control devices, and
(3) checking and replacement of air breathing filters and positive crankcase ventilation valve as necessary, and
(4) replacement of spark plugs, points, wires, and
(5) for all motor vehicles equipped with computer controlled closed-loop feedback exhaust emission control devices and systems, inspecting the operation of the emission control system according to the motor vehicle manufacturer's specified procedures, including hose routing and on-board diagnostics, new vehicle warranty, and repair or replacement as necessary.

Manufacturer means every person engaged in the business of constructing or assembling vehicles of a type required to be registered under the laws of the state of New Mexico.

Manufacturer's certificate of origin or MCO means a certification, on a form supplied by or approved by the MVD, signed by the manufacturer, stating that the new vehicle described therein has been transferred to the New Mexico dealer or distributor named therein or to a dealer duly licensed or recognized as such in another state, territory or possession of the United States and that such transfer is the first transfer of such vehicle in ordinary trade and commerce. Every such certificate contains a space for proper reassignment to a New Mexico dealer or to a dealer duly licensed or recognized as such in another state, territory or possession of the United States. The certificate also contains a description of the vehicle, the number of cylinders, type of body, engine number and the serial number or other standard identification number provided by the manufacturer of the vehicle, where such exists.

Model year means the year of manufacture of the vehicle based on the annual production period of the vehicle as designated by the manufacturer and indicated on the title and registration of the vehicle. If the manufacturer does not designate a production period for the vehicle, then the model year means the calendar year of manufacture.

Motor vehicle means any vehicle which:
(1) is propelled by a spark (such as gasoline or natural gas fueled) or compression ignition (diesel), internal combustion engine, and
(2) has four or more wheels in contact with the ground, and
(3) is subject to registration with the MVD to an owner of record who is domiciled within Bernalillo county, or is a government vehicle which is assigned to a governmental unit within Bernalillo county, and
(4) has a GVW greater than 1,000 and less than 10,001 pounds, and
(5) is for use upon public roads and highways, and
(6) is a model year that is 35 years old or newer, and
(7) is a vehicle not otherwise exempted by this part.

New motor vehicle is a vehicle, which has undergone a transfer of ownership and is being registered for the first time to any person except in the sale to another licensed motor vehicle dealer for the purpose of resale as a new vehicle.

Operator means driver, as defined in this part.

Owner means a person who holds the legal title of the motor vehicle or, in the event a vehicle is the subject of an agreement for conditional sale or lease thereof with the right of purchase upon performance of the conditions stated in the agreement and with an immediate right of possession vested in the conditional vendee or lessee, or in the event a mortgagor of a vehicle is entitled to possession, then such conditional vendee or lessee or mortgagor.

Pass fail criteria means those standards set by this part which specify the maximum allowable motor vehicle exhaust emissions under appropriate specified operating conditions.

Person means any individual, partnership, firm, public or private corporation, association, trust, estate, political subdivision or agency, or any other legal entity or legal representative, agent, or assign.

Pretesting disclose the pass/fail status of the vehicle before the test is completed.

Program or VPM program means the Albuquerque/Bernalillo county vehicle pollution management program.

Program manager means a classified city employee selected in accordance with provisions of the Joint Powers Agreement between the city and the county to perform for the joint air quality control board those duties required to enforce and administer the provisions of this part, or the program manager's designee.

Reconstructed vehicle means any vehicle which shall have been assembled or constructed largely by means of essential parts, new or used, derived from other vehicles or makes of vehicles of various names, models and types or which, if originally otherwise constructed, shall have been materially altered by the removal of essential parts, new or used, derived from other vehicles or makes of vehicles.

Registration and re-registration means both original registration, and renewal of motor vehicles as provided in the New Mexico Motor Vehicle Code, Chapter 66 NMSA 1978.

Shall be inspected means the vehicle shall be subjected to testing and inspection as applicable to model year and weight classification and shall satisfy the criteria of this part as evidenced by the issuance of a certificate of inspection.

Standard gases means NIST certified emissions samples of gases maintained as primary standards for determining the composition of working gases, field audit gases, or the accuracy of analyzers.

Truck means every motor vehicle designed, used or maintained primarily for the transportation of property. In addition, all vehicles with a GVW greater than 6000 pounds shall be considered a truck.

EIS means a program-certified, garage-type, computer controlled NDIR vehicle exhaust gas analyzer system which is capable of performing a preconditioned two-speed idle test on-board diagnostic test, and pressurized gas cap test on vehicles as required by 40 CFR Part 51 appendix B to Subpart S and meets or exceeds the specifications adopted by the program.

VIR means vehicle inspection report, a program-certified document (VIR) signed by a certified Air Care Inspector or other program authorized official stating that the vehicle described therein is either in compliance (pass), not in compliance (fail), or has an approved time extension in order to achieve compliance through additional repairs or adjustments (time-limit extension).

Visible emissions means any fume, smoke, particulate matter, vapor or gas, or combination thereof, except water vapor or steam.

VPMP training manual or training manual means a compilation of training procedures developed by the program manager.

Wholesale means either any person selling or offering for sale vehicles of a type subject to registration in New Mexico to a vehicle dealer licensed under the Motor Vehicle Code, Chapter 66, NMSA 1978, or any person who is franchised by a manufacturer, distributor or vehicle dealer to sell or promote the sale of vehicles dealt in by such manufacturer, distributor or vehicle dealer, but does not include the act of selling a vehicle at retail as a dealer subject to the dealer-licensing provisions of the Motor Vehicle Code.

Working gases means program-approved span gases maintained by an authorized Air Care inspection station to perform periodic calibration of approved exhaust gas analyzers.

11. Abbreviations and symbols

(1) A/F means air/fuel
(2) ASE means the National Institute for Automotive Service Excellence
(3) CO means carbon monoxide
(4) CO_2 means carbon dioxide
(5) DTC means diagnostic trouble code
(6) EHD means the Environmental Health Department
(7) EPA means the Environmental Protection Agency
(8) GVW means gross vehicle weight
(9) HC means hydrocarbon
(10) HP means horsepower
(11) LNG means liquefied natural gas
(12) LPG means liquefied petroleum gas
(13) MPH means miles per hour
(14) MCO means manufacturer's certificate of origin
(15) MVD means the Motor Vehicle Division of the New Mexico Taxation and Revenue Department
(16) NDIR means non-dispersive infrared
(17) NOx means oxides of nitrogen
(18) NIST means National Institute of Standards and Technology
(19) OBDII means On-Board Diagnostics second generation
O2 means oxygen
(20) % means percent
(21) PCV means positive crankcase ventilation
(22) ppm means parts per million by volume
(23) VIN means vehicle identification number