

# THE NEVADA CLEAN AIR BULLETIN

## A NEVADA I/M PROGRAM INFORMATIONAL NEWSLETTER

State of Nevada  
Department of Motor Vehicles

Compliance Enforcement Division  
Emission Control Program



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Carson City, NV. 89711

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### CAREERS IN THE VEHICLE SERVICE & REPAIR INDUSTRY

At a recent meeting in North Carolina, emission program representatives from the United States and Canada discussed how involved it can be to repair today's technologically advanced vehicles, when they fail their emission test. A well respected industry trainer based on the east coast informed the group that many ASE L1 certified technicians are in their fifties. These technicians will be retiring in the near future, and there are not nearly enough younger people entering the automotive repair field.

Nevada is no different than other states. Our motorists need technicians to keep their vehicles running properly. For a young person looking into a challenging career the vehicle service and repair industry might be a good choice. Certification for repair of emission failures is one aspect of being a journeyman technician. Nevada's emission program has a Test & Repair (2G) inspector license, and there are a couple of options individuals can pursue to obtain this license rating.

Obtaining a Test Only inspector license (1G) is the first step for an individual to complete.



If someone has the Automotive Service Excellence (ASE) Advanced Automotive Diagnostic (L1) certification, which will remain valid for the 24 months period of 2G licensure, they will be able to obtain their Test & Repair (2G) rating without having to take any further exams or attend additional training.

A second option is available for someone who does not have the ASE L1 certification. There is a written exam offered by DMV, which a 1G inspector can take without having to attend any additional training. If a passing score is achieved, the 1G license can be upgraded to a 2G status. If someone does not obtain a passing score, they must attend training which is approved by the Department. Once this training is complete, the individual can then schedule another date to retake the exam.

Inspectors who have their 2G certification need to attend in-service training to maintain this classification. There are a number of in-service training classes available within the industry that can allow them to maintain their Test & Repair (2G) classification. In-service training is important to attend, in order to stay abreast of the new technological advancements which come up continually within the vehicle servicing industry.

The following statistics are from calendar year 2007, for Test & Repair (2G) new applicant exams:

Region	Total Exams	Passed	Failed	Pass Rate
Southern Region	115	15	100	13%
Northern Region	26	8	18	31%

Just over 16% of new 2G applicants successfully completed their exams during calendar year 2007.

Please feel free to contact the Emission Control Training Officer, Hal Greene, for further information on becoming a 2G inspector. Hal's telephone number is (702) 486-4999, or he may be contacted through e-mail at [hgreene@dmv.nv.gov](mailto:hgreene@dmv.nv.gov)

**AUTOMOTIVE SERVICE  
EXCELLENCE  
(ASE)**

For many years now ASE has been the industry leader in voluntary certification.

ASE has a very good website available for those of you interested in becoming certified. The website address is: <http://www.asecert.org/>

The website provides a vast amount of information with regards to voluntary certification:

- A bit of history about ASE. ASE has been around for about thirty years.
- Some important reasons to become ASE certified
- Qualification requirements to take the exams
- Areas of certification available to the industry
- How to register to take the exams
- Where to obtain study materials
- Information on the exams, including how the exams are developed
- Dates when exams can be taken

As mentioned in this newsletter, ASE A8 & L1 certification are recognized by DMV as means to meet certain criteria which is required to obtain approved emission inspector licenses in Nevada.

**TRAINING UPDATE**

All persons applying for licensing as a 1G inspector for the first time must either complete an authorized 1G 20 hour course OR be currently certified by the National Institute for Automotive Service Excellence (ASE) in either A8, Engine Performance, or L1, Advanced Engine Performance.

**Approved Training Providers**

1G 20 Hour and 2G 40 Hour modular and 2G 20 Hour Update Classes:

***Automotive Training & Diagnostic Systems***

David Resetar  
3255 Ann Road (Dr. Auto)  
Las Vegas, Nevada 89031  
702-306-4180

**Community College of Southern Nevada**

Robin Roques  
3200 East Cheyenne Avenue  
North Las Vegas, Nevada  
702-651-4806

**Las Vegas Training Center**

Charlie Robertson  
3111 S. Valley View Boulevard, Suite B-116  
Las Vegas, Nevada  
702-388-1777

**Truckee Meadows Community College**

Scott Allen  
475 Edison Way  
Reno, Nevada  
775-856-5312  
[www.tmcc.edu/wdce](http://www.tmcc.edu/wdce) (Select Professional Skills Classes under View Our Programs Option)

The following approved classes may be used to satisfy the Class 2 (2G) approved emission inspector 12 hours of training requirement. In addition to attending 12 hours of training, Approved Class 2 (2G) Inspectors must also take and pass the Department's Class 2G renewal examination. ASE L1 test results might be acceptable in lieu of the Department's renewal exam, providing the inspector has fulfilled the 12 hour training criteria. For further questions on acceptance of ASE L1 exam results, please contact the Department's Training Officer.

1. AC Delco instructor led classes except basic electrical. The course certificate of completion document must indicate how many hours the individual attended toward the minimum of 12 hours training.
2. Carquest Instructor led classes except brake and climate control. The course certificate of completion document must indicate how many hours the individual attended toward the minimum of 12 hours training.

3. ATG training seminars. The course certificate of completion document must indicate how many hours the individual attended toward the minimum of 12 hours training.
4. ITS Classes on an individual basis. The course certificate of completion document must indicate how many hours the individual attended toward the minimum of 12 hours training.
5. Napa instructor led OnSite training classes listed below. The course certificate of completion document must indicate how many hours the individual attended toward the minimum of 12 hours training.
  - a. Labscope diagnostics I and II
  - b. Ford EEC V Diagnostics
  - c. Ford Trucks Fuel Injection
  - d. GM Trucks, Central Port Injection
  - e. GM Trucks Fuel Injection Diagnostics
  - f. GM Trucks Featuring OBD II Part 1 and Part 2
  - g. Toyota Fuel Injection

**Note:** Only original certificates or letters will be accepted for proof of training and must include an original signature by a representative of the training provider as well as the number of hours attended.



**Written By:** Hal Greene, Emission Control Training Officer, Compliance Enforcement Division, Department of Motor Vehicles.

## **REDUCING GREENHOUSE GAS**

### **EMISSIONS & BETTER FUEL MILEAGE GO TOGETHER**

As you probably have heard, greenhouse gas emissions and the cost of fuel are two very topical issues. There are a few tips available which can both reduce greenhouse gas emissions and help fuel mileage:

#### **CORRECT TIRE PRESSURE**

Simply maintaining proper air pressure in a vehicle's tires can increase fuel mileage. Under-inflated tires can lower gas mileage by 0.4 percent for every 1 psi drop in pressure of all four tires. Properly inflated tires are safer and last longer.

#### **KEEP ENGINES TUNED**

Keeping engines properly tuned can save money. The U.S. Department of Energy says fixing a car that's noticeably out of tune can improve gas mileage by 4 percent. Even replacing a clogged air filter can improve a vehicle's fuel mileage by as much as 10 percent.

#### **DRIVE SLOWER**

Driving "55" not only saves lives, it also increases fuel mileage. Government data shows that fuel mileage decreases rapidly at speeds above 60 mph. Each 5 mph driven over 60 mph is similar to paying an additional \$0.15 per gallon for gasoline. Avoiding jackrabbit starts and stops also increases fuel mileage.

#### **BUYING GASOLINE**

If motorists buy their gasoline when it is cooler outside it is more cost effective. Fuel is denser in cooler temperatures, and gas is measured by volume at the pumps.

## **REDUCING IDLE TIME**

Excessive idling of a vehicle engine wastes fuel, increases emissions and generally takes its toll on the vehicle itself. Motorists do themselves a favor by avoiding gridlock and reducing idle time.



### **REDUCE WEIGHT IN YOUR VEHICLE**

Carrying items in the trunk of a vehicle increases the overall weight of the vehicle. Eliminating these unnecessary items from the trunk of the vehicle will help increase gas mileage by lowering the weight of the vehicle, especially in stop and go traffic.

These are just a few tips for saving fuel and reducing emission levels which can be passed along to your customers.

There are a lot of other things which can be done to reduce greenhouse gas emissions outside the automotive world. For instance, "Before 1979, the SEERs of central air conditioners ranged from 4.5 to 8.0. Replacing a 1970s-era central air conditioner (SEER of 6) with a new unit having a SEER of 12 will cut air conditioning costs in half."

Please take some time to review some of the information found on the following technical resources. These websites will give you a lot of new tips to pass along to your customers, on how to save money and reduce emissions.

## **GREENHOUSE GAS INFORMATIONAL RESOURCES**

United States Environmental Protection Agency:  
<http://www.epa.gov/climatechange/wyecd/road.html>  
Global Warming Facts:  
<http://globalwarming-facts.info/50-tips.html>  
National OBD Clearinghouse:  
<http://www.obdclearinghouse.com/>  
Car Care Council:  
<http://www.carcare.org/index.shtml>  
Automotive Service Association:  
<http://www.asashop.org/>

### **REGULATION AMENDMENTS**

A number of regulations have either been adopted, in the amendment process, or being considered for amendments. The regulations currently involved with the amendment process are listed below.

### **EMISSION WAIVERS (R171-07)**

A regulation amendment became effective on April 17<sup>th</sup>, to allow waivers for OBDII vehicles. A waiver can only be issued for vehicles which failed their emission tests due to having the Malfunction Illumination Light (MIL) commanded on. To obtain the emissions waiver, the vehicle must:

- Fail the initial emission test for having the MIL commanded on.
- Receive repairs related to the MIL commanded on.
- Fail the emission re-inspection due to having the MIL commanded on.
- Be inspected by a DMV Representative at one of the Emission Control Test Labs.

A copy of this adopted regulation can be found in the newsletter.

## **LIGHT DUTY DIESEL (R105-07)**

A number of changes are proposed for testing light duty diesel vehicles:

- Full time all wheel drive vehicles will receive a visual inspection of emission control devices. The dynamometer opacity test will not be performed because a two-axle dynamometer is required.
- 2008 and newer vehicles will be inspected for tampering of the particulate filters, if equipped.
- The dynamometer load and speed values will be updated.
- The re-inspection procedure will not solely relate to the area(s) of initial failure. For vehicles failing the initial emission test a complete re-inspection procedure will be required.
- Specifications for the personal computers (PC) to be used in the upcoming light duty diesel networked system will be included into regulation. A PC will be used as part of the emission inspection process for light duty diesel vehicles in the near future, to transmit the test results to DMV.

In the near future you will be notified when a workshop is scheduled to discuss the above proposed amendments to the light duty diesel emissions program. (Revisions to first draft in process)

### **EQUIPMENT/TEST PROCEDURE (R022-07)**

A number of changes are proposed for NV2000 emission analyzers and the prescribed emission testing procedures:

- Authorized emission stations may obtain DMV approved OBDII analyzers to supplement their equipment inventory. At least one full function analyzer must continue

to be maintained at each emission station.

- Fleet stations only need an OBDII analyzer *if* they choose.
- Vehicles failing their initial emission test for a missing or defective gas cap must be retested. Sign off of the initial emission test once the gas cap has been replaced will no longer be allowed.

In the near future you will be notified when a workshop is scheduled to discuss this proposed amendment. (Revisions to first draft in process)

### **AUDITS OF USED VEHICLES**

#### **(R129-07)**

A number of changes are proposed for the process DMV staff uses to audit vehicles offered for sale at licensed vehicle dealers. The audit process will be clearly defined, with an increased emphasis on how vehicles intended for wholesale transactions must be handled.

In the near future you will be notified when a workshop is scheduled to discuss this proposed amendment. (Revisions to first draft in process)

### **ANNUAL INSPECTION FEE SURVEY**

A change is being considered for the annual industry survey to determine the maximum inspection fees based on NAC 445B.580, NAC 445B.5805 and 445B.589 procedures.

*If* this regulation is proposed for amendments the DMV will notify you when a workshop is scheduled.

More information can be seen at:

[http://leg.state.nv.us/Register/indexes/2007\\_NA\\_C\\_REGISTER\\_NUMERICAL.htm](http://leg.state.nv.us/Register/indexes/2007_NA_C_REGISTER_NUMERICAL.htm)

### **NETWORK OUTAGES**

There have recently been outages of the Vehicle Information Database (VID), which prevented emission stations from performing emission inspections. The Department of Motor Vehicles Information Technology Division is currently working hard to install new hardware & software, which will tremendously reduce the chances of future outages.

A new series of servers, specifically for the emission program, are being put in place for the VID. These servers will be completely separate of the Mainframe unit housed at the Nevada Department of Information Technology (DOIT). This will allow the emission analyzers to connect with the VID 24 hours a day, seven days a week, when the Mainframe is being serviced or is out of operation. Emission inspectors might be required to enter a bit more vehicle information into the analyzer at the start of an emission test when the Mainframe is not operating and the VID is working in this Failsafe Mode, but entry of additional vehicle information would only be required if the vehicle cannot be found in the vehicle database used by the Department. The Department expects to have the VID Failsafe Mode in operation sometime in September.

We would like to thank all of the emission stations for their participation and patience during the recent transition from a contractor operated VID to the VID operated by the Department of Motor Vehicles. Progress updates on the new Failsafe Mode will be sent out to our authorized stations in the near future.

### **LIGHT DUTY DIESEL TESTING**

Another major project being carried out by the Department of Motor Vehicles Information Technology Division (MVIT) is the networking of light duty

diesel emission stations to the Vehicle Information Database (VID). This program is currently paper based, which prevents use of the alternative online registration renewal options by the owners of light duty diesel vehicles.

The test equipment used to carry out the actual test on light duty diesel vehicles remains. The emission inspector will enter the test results into an application being designed by MVIT, which will be made accessible by using a personal computer.

This program should be ready about the same time the Vehicle Inspection Database Failsafe Mode is initiated, sometime around September of this year. In addition to allowing motorists the ability of using the alternative services, station operators will be able to purchase Vehicle Inspection Reports online, using the Station Manager application. DMV staff will no longer be required to manually enter the data from the paper emission certificates into a computer, freeing staff up to carry out other tasks.



## **ON-BOARD DIAGNOSTICS II (OBDII) READINESS MONITORS**

DMV emission program representatives know what a challenge it can be to explain why a vehicle was just “Rejected” from emission testing. Motorists seem to have an easier time understanding a fail result, versus a reject result.

Motorists may find it easier to understand a rejected result if they knew their vehicle constantly runs a self-test for emissions every time they drive. Every major emission related component has a monitor. And, monitors essentially conduct a self-test of major emission components. The OBDII emission test is meaningless if we do not make sure the vehicle’s computer has completed the self-test of all major emission components. Honestly, we don’t have any idea if that OBDII vehicle has an emissions problem unless all the monitors have completed their self-test and become “ready”. USEPA has provided a little bit of leeway by allowing emission programs two unset monitors on 1996-2000 model vehicles, and one unset monitor for 2001 and newer model vehicles before issuing a reject result.

A readiness monitor is a test that is programmed into the OBD II PCM (computer) that is designed to test a specific, particular emission control component or system. Once the test has been completed the flag or condition will change from not completed to completed. This will not indicate that the component or system has passed or failed the test, just that the test has been completed.

There are currently eleven (11) monitors that are identified as part of the Nevada OBDII emission inspection procedures. Not all vehicles have all eleven (11) monitors.

Drive cycles are a set of conditions that must be met for a particular test to run. This includes temperature, load, other component tests and a series of driving parameters that must be followed in a particular order. Some are simple, some are complicated. These were designed to run during the first portion of the Federal

test procedure driving cycle. As with the location of the DLC the rules were interpreted differently by different manufacturers.

Enabling criteria: A set of conditions that must be met for a particular test to run.

All monitors may be reset to not ready anytime the battery voltage is removed from the PCM, requiring a sufficient number of monitors to be reset before the vehicle is ready for an OBD II Emission Inspection, if not, a reject will occur.

First, let's review continuous monitors:

Misfire: This monitor begins to watch for misfires as soon as the engine is running and continues as long as the engine remains running. While there is generally no enabling criteria, there are conditions that will prevent this test from running.

Fuel System: This monitor begins to watch for fuel related problems as soon as the engine is running and continues as long as the engine remains running. While there is generally no enabling criteria, there are conditions that will prevent this test from running.

Comprehensive component: This monitor begins to watch for electrical shorts, opens and out of range as soon as the engine is running and continues as long as the engine remains running.

Now, let's take a look at the remaining non-continuous monitors:

Catalyst: This monitor is testing for catalyst efficiency.

Heated Catalyst: This monitor is testing for catalyst heater.

Evaporative System: This monitor is testing for evaporative flow and leaks.

Secondary air system: This monitor is testing for secondary air injection operation.

Air conditioning system: This monitor is testing for CFC (refrigerant) leaks.

Oxygen sensor: This monitor is testing for Oxygen sensor activity.

Oxygen sensor heater: This monitor is testing for oxygen sensor heater operation and performance.

EGR system: This monitor is testing for EGR operation including flow as well as pintle movement.

Most vehicles that have problems with completing monitor tests are early OBDII systems found on 1996 & 1997 models. These vehicles are evaluated a bit differently during the emission test, using adjusted test parameters provided to us by USEPA. These early vehicles are not considered a problem any longer for our program because of these adjusted test parameters. Most likely any vehicle now rejected from the emission test has recently lost battery power, causing the memory to clear in the vehicle computer, or data trouble codes have been cleared using a code reader or scan tool, which also causes readiness monitors to be unset.

Readiness monitors on the majority of vehicles will complete a self-test and become set within one week of normal driving. A small percentage of vehicles may need to have specific drive patterns (drive cycles) performed in order to set certain readiness monitors. Manuals which have most drive patterns (drive cycles) are available from several providers of automotive information.

Additional monitors are expected to be on new vehicles coming out for sale in the near future. For starters, thermostat operation is becoming much more of a concern, because proper operating temperature is critical for clean emissions. Some OBDII systems may be monitoring the operation of the thermostat.

The Department of Motor Vehicles is currently reviewing all current outreach materials which address readiness monitors. We expect to be improving our outreach materials in the near future to better explain readiness monitors. We may also be including some additional readiness monitor information into our inspector training classes sometime in the future.

### **Station Manager Access**

With the new DMV VID (Vehicle Information Database) now in place, some of you may have been experimenting with what you can do as a manager on the DMV Web Portal. You may review all emission tests that were performed at your emission station(s), you can reprint an emission test for a customer and you can review how many certificates are remaining at each station. You may also purchase more certificates if you discover you are running low.

When purchasing certificates, please make sure the page header is displaying the station name and address of the appropriate business. If you are a manager of more than one business, this will insure you are purchasing emission certificates for the correct location.

Once you enter the required information for purchasing certificates, and you select "Submit" on the VIR Payment window, you are responsible for the purchase of these certificates, whether

the station name and location are correct or not.

Something else to remember, if you are no longer working at a particular station, you need to make sure that your old and new employers submit the proper paperwork to terminate and then re-establish your access to the DMV VID Web Portal. If this is not done, the potential exists to purchase certificates for the wrong business.

### **Consular Corp License Plates Requiring Registration Renewal**

Effective July 1<sup>st</sup>, 2008, emission stations that perform registration renewals will not be able to renew Consular Corp license plates. Customers upon registration renewal, will now have to present required documents to the Department, and are only allowed to walk in with the documents. Mail in renewal is not allowed for the Consular Corp license plates. This is similar to the Professional Fire Fighters license plates which also must be renewed in person. If you have any questions, please contact Debbie Shope at (775) 684-4841.

