

Good morning, my name is \_\_\_\_\_

Today's class is about emission testing diesel vehicles in Nevada. We will learn the requirements to become licensed and the proper and safe procedures to complete diesel emission inspections. This class will prepare you to pass the written and practical exams.

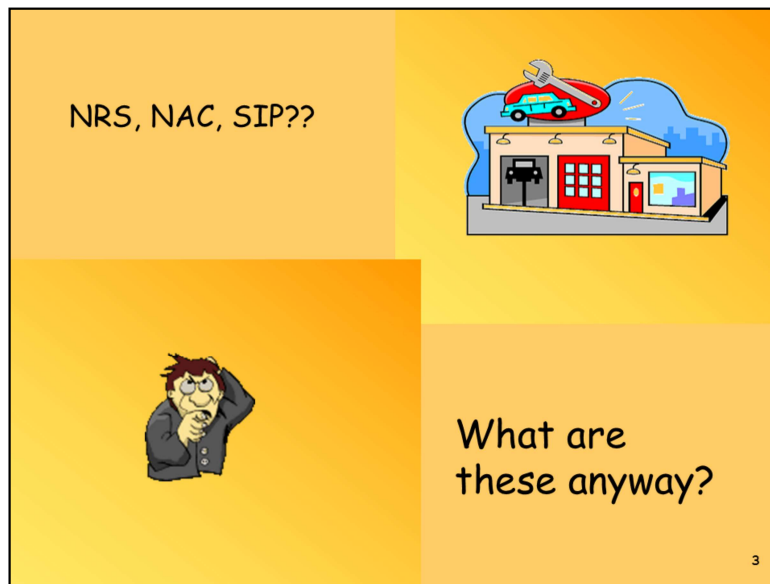


**Class overview includes:**

- Licensing procedures
- NRS and NAC sections 445b. as they pertain to diesel emission testing
- Approved test equipment
- Test procedures
- Safety recommendations
- Customer service recommendations
- Inspector's and station owner's responsibilities
- Pre-practical training checklist

**Please note:** This class is open to all relevant questions and discussion.

We encourage you to take notes in your Diesel Inspector's Workbook, so you can refer to them during the open-book written exam and at any future time during your diesel emission testing career.



The laws that regulate diesel emission testing in Nevada are in section 445b of Nevada Revised Statutes (NRS). The associated regulations are in section 445b of the Nevada Administrative Code (NAC). Regulations are an interpretation of how the laws are to be implemented. Emergency, temporary, proposed, and adopted regulations that have not yet been codified are posted on the Nevada Legislature website, listed in the Nevada Register.

NRS, NAC, and the Nevada Register are available on the internet at:

<https://www.leg.state.nv.us>

## Classes and Ratings of Inspectors



**Class 1**  
Test Only

**Class 2**  
Test and Repair

**D Rating**  
Light Duty Diesel  
Powered

**1G rating**  
Gasoline Powered

**2G rating**  
Gasoline Powered

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For gas emission inspectors and stations, Nevada has two classes of licenses. Class 1 is licensed to perform emission inspections only, class 2 is licensed to perform emission inspections and diagnose, adjust, repair, and install emission components. For diesel inspectors and stations, Nevada only has the D rating, since diesel repairs are not regulated. The D rating would simply be added to your G license. If you are not a gasoline emission inspector, you can be licensed as a Diesel only inspector.



So, What steps  
are required to  
become an  
Authorized  
Diesel Inspector?



Required documentation

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To become licensed as a diesel emission inspector, you'll need to complete this class, take and pass the written exam with a score of 80% or higher, then take the practical exam without error. The diesel practical exam is administered at your place of work, using your employer's approved test equipment. If you fail either the written or practical exams, you will not be allowed to retest for 7 days. If you fail a second written or practical exam, you will need to retrain before taking the test a third time. You will need to know how to maintain and calibrate the test equipment. Refer to the diesel emission test procedure information sheet.



To change your place of employment or add an additional employer, you'll need a Certificate of Employment completed and signed by your new employer and completed by you. Do not sign the form until instructed to do so at the Occupational Business License counter inside DMV.

The Diesel Inspector license must be renewed every two years.

You may attempt to renew your license 90 days prior to expiration.

To renew Diesel Inspector license, complete the Diesel recertification class and take and pass the written exam with a score of 80% or higher.

Bring a new Certificate of Employment, your old license, and \$25.00 to the Occupational License counter inside the DMV to renew.

#### Fees:

New license	\$25.00
Biennial renewal	\$25.00
Additional location	\$2.00
Transfer location	\$2.00

There is no charge to add Diesel rating to a current Gas license.

Beginning July 2015, DMV will be adding a Technology Fee to each transaction.

## Authorized Inspection Station Responsibilities (Diesel)



Required Emission  
Inspector  
Required  
information  
sources

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Emissions station licenses and emission inspectors' licenses are to be displayed between four and six feet from the floor in an area frequented by customers.

Business hours are to be posted in an area frequented by customers. Minimum business hours are: 8:00 - 5:00 pm, Monday through Friday. These hours are considered normal business hours and must be adhered to.

For a station that has only one licensed inspector, the return time must be posted in any instance where the station is closed during normal business hours.

Station must employ at least one full-time inspector with a D rating.

Must inspect all Diesel-powered motor vehicles that require a test that are presented at the station unless there is a safety issue. Remember-No pre-testing.

Required reference material:

NRS & NAC sections 445b, pertaining to vehicle emission testing.

Emission Control Application guides or equivalent information sources.

Test equipment owner's manual.

All Vehicle Inspection Reports must be accompanied by a printout of the opacity readings.



**Diesel inspectors are expected to:**

1. Understand the maintenance, calibration and operation of the inspection equipment.
2. Understand how to perform a vehicle inspection correctly, completely, and safely.
3. Determine whether an emission inspection is required.
4. Inspect any diesel-powered motor vehicle requiring an inspection that is presented at the station, unless it cannot be tested safely.
5. Do not pre-test. Pre-testing is a violation of regulation.
6. Follow correct and safe test procedures.
7. Determine the Manufacturer's GVWR. Remember, greater than **14,000** pounds is exempt.
8. Determine the year, make and model of each vehicle.
9. Determine if a vehicle is all-wheel-drive or has traction control.
10. Determine what equipment the state of Nevada and USEPA require to be present.
11. Locate and determine that all required equipment is present and appears functional.
12. Be able to demonstrate the operation of any emission information source used at the station where they are employed.
13. Understand NRS & NAC sections 445b
14. Keep yourself educated with current and future emission technology in the diesel industry.
15. Notify the lab within ten days if you leave the employment of any station.

**Inspector  
responsibilities**



**Pre-testing Defined**

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Pre - testing is revealing a failing condition to the customer prior to issuing a failing VIR. You are required to perform the entire inspection and test, then issue a VIR with the results.

## DMV Duties



Educating inspectors  
Challenge tests  
Smoking vehicle referee  
Issue waivers  
Testing inspectors

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### Our duties include:

- Educating inspectors, both in the classroom and in the field with what's called field remedial training.
- We audit emission stations and inspectors.
- We organize and implement the covert audit program.
- We audit Nevada used car dealers for emission compliance.
- We accept applications for waivers, and grant some of them.
- We are responsible for testing inspectors, both with written and practical exams.
- We serve as a referee for smoking vehicles.
- We issue engine swap and vehicle emission control information forms.
- We assist in developing inspector training and testing materials.
- We assist in performing regression testing of software and emission test hardware.
- We ride with the Heavy-Duty Diesel enforcement officer, who stops over-the-road trucks that are smoking. We perform a roadside snap-idle opacity test. If the truck fails, the enforcement officer writes the truck driver a ticket.
- We perform challenge tests. A challenge test is used to validate the overall test results.

## DMV Duties



Field remedial training

Dealer inspections

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DMV Emission Technicians are legally permitted to openly monitor activities at emission stations. This is called random field remedial training. It may occur at any time in your emission testing career. Within the first 60 days of receiving a new inspector's license, the DMV auditor will come to your place of business and have you perform an emission inspection. If any procedural or safety procedures are not followed, the error will be noted on a performance report. You and your manager will be required to sign the report. You'll get another chance to pass the overt audit in the future. Performance reports are stored in the station's and inspector's permanent files.

Any violation or potential violation of state or federal law observed during any audit could trigger additional covert audits at the station.



An emission technician will audit your emission station at least once per month.

All emission stations are required to have the following on display:

1. Station license
2. Inspector licenses
3. Business license
4. Outdoor metal emission station sign
5. Indoor information placard
6. NAC & NRS sections that pertain to emission testing (section 445b)
7. Test equipment operator's manual
8. Current emission device application guide (or Alldata or Mitchell-on-Demand)

**Note:** All inspectors must have access to and be able to demonstrate that they are capable of retrieving emission device application information from the system.

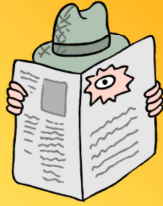




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These are examples of licenses that are properly posted.

## DMV Duties



## Covert Audits

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The Department will conduct covert audits on all stations and inspectors. Items like customer complaints, previous failed covert audits, remedial trainings, irregularities reported to the state emission database, and station violations during monthly audits can trigger additional covert audits beyond the annual requirement.

For use in a covert inspection, a motor vehicle's emission control system will be altered so that an approved inspector, using due care and following the prescribed testing procedures, will be able to readily, visually, identify the emission control system or component that has been tampered with, is missing, or appears inoperable.

If a violation occurs during a covert audit, the Department will issue a preliminary written notice of violation to the emission inspector, to be followed with the Notice of Violation by certified mail within five business days.

If you receive any notice of violation, read it carefully. If you have any questions, ask the investigator to explain.



## **Covert Violations**

### **Inspector:**

The Department may impose administrative fines or other penalties against an emission inspector for any violation of NAC 445B.580, 5805 or 589 (test procedure) during a covert audit. Violations occurring within the most recent two years are classified as current violations.

First violation-Cease and desist order and required to attend a class conducted by the Department.

Second violation-Impose a \$250 fine, 10-day license suspension, and successfully complete an educational course that is approved by the Department.

Third violation-Impose a \$500 fine, and 90-day license suspension.

Fourth violation-Permanent revocation of the emission inspector's license.

### **Station owner:**

The Department may impose administrative fines or other penalties against an emission station owner for any violation of NAC 445B.580, 5805 or 589 during a covert audit. Violations occurring within the most recent two years are considered to be current violations.

First violation-Will receive a Written Notice.

Second violation-Require the station owner or his authorized representative to attend a class conducted by the Department.

Third violation-Impose a fine of \$1,000

Fourth violation-Permanent revocation of the emission station license.

Additional criminal penalties may be pursued by the Department.

Civil penalties may be pursued by an individual customer.

If an emission inspector's license has been revoked by the Department pursuant to this section, he shall not directly or indirectly engage in any activity related to performing emission inspections.

Station owners are responsible for any action or omission that their employee commits as part of their employment.



## Non-covert

### Inspector:

The Department may impose administrative fines for violations occurring within a 2-year period, according to the following schedule:

First offense-A fine of not less than \$100, or more than \$500.

Second offense-A fine of not less than \$500, or more than \$1,000.

Third offense-A fine of not less than \$1,000, or more than \$1,500.

Fourth or subsequent offense-A fine of not less than \$1,500, or more than \$2,500.

### Station owner:

The Department may impose administrative fines for violations occurring within a 2-year period, according to the following schedule:

First offense-A fine of not less than \$100, or more than \$500.

Second offense-A fine of not less than \$500, or more than \$1,000.

Third offense-A fine of not less than \$1,000, or more than \$1,500.

Fourth or subsequent offense-A fine of not less than \$1,500, or more than \$2,500.

### Some examples of non-covert violations:

Station not open during normal business hours

Refusing to test a vehicle presented at the facility

Signage issue

Licenses not posted properly

Failure to follow screen prompts

Return time not posted on a single-inspector station that is closed during normal business hours



### **Administrative fines:**

The Department will impose fines for violations not during a covert audit, occurring within the 2-year period immediately preceding the most recent offense according to the following schedule:

- (a) For a first offense, a fine of not less than \$100 or more than \$500.
- (b) For a second offense, a fine of not less than \$500 or more than \$1,000.
- (c) For a third offense, a fine of not less than \$1,000 or more than \$1,500.
- (d) For a fourth or subsequent offense, a fine of not less than \$1,500 or more than \$2,500.

For the purposes of paragraphs (b), (c) and (d), a cease and desist order issued by the Department shall be deemed to be a first offense.

For violations on a covert audit, the Department will impose such penalties for violations occurring within a 2-year period, according to the following schedule:

- (a) For a first offense, issue a written notice.
- (b) For a second offense, require the owner of the test station or his authorized representative to successfully complete an educational course which is established and conducted by the Department, not later than the date specified in the notice of the violation.
- (c) For a third offense, impose a fine of \$1,000.
- (d) For a fourth offense, revoke the license of the owner to operate the test station.

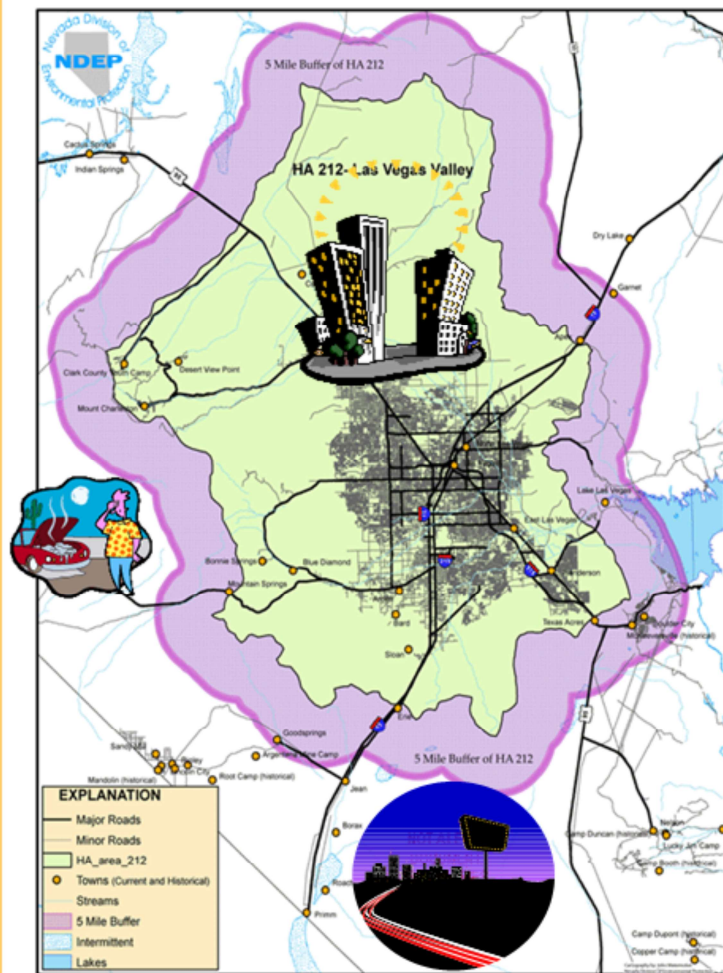
An owner of a test station whose license is revoked by the Department pursuant to this section shall not directly or indirectly engage in any activity

related to emission control inspections of motor vehicles, if the violation was knowing or willful or involved fraud.

Additional civil penalties may be pursued by the Department or an individual customer.

Fine Schedule		
Covert	Inspector	Station
First	C&D order and attend DMV conducted course	Written notification
Second	\$250.00 fine + DMV approved course at DMV approved provider + 10-day suspension	Owner or representative to complete educational course conducted by DMV
Third	\$500.00 fine + 90-day suspension	\$1000 fine
Fourth	Permanent Revocation	Permanent Revocation
Non Covert	Inspector	Station
First	\$100 - \$500	\$100 - \$500
Second	\$500 - \$1,000	\$500 - \$1,000
Third	\$1,000 - \$1,500	\$1,000 - \$1,500
Fourth	\$1,500 - \$2,500	\$1,500 - \$2,500
Willful, intentional, or violations involving fraud, are subject to more immediate and serious consequences as allowed by law.		
When a C&D is issued in lieu of a fine, it still counts as a first violation.		





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Diesel powered vehicles within the applicable year and weight range, including vehicles owned by the State and other political subdivisions, are required to be inspected annually for registration and renewal if they are based in the emissions Inspection and Maintenance (I/M) areas in Nevada.

In Washoe County, the entire area south of the 40 degrees north latitude.

In Clark County, the entire hydrographic basin 212, including the 5-mile buffer shown in purple.

There are exempt areas in each county. In Washoe County, Crystal Bay, Nixon, Wadsworth, Empire, Incline Village and Sutcliffe are exempt. In Clark County, Goodsprings is exempt.

In the Reno area there are three zip codes shared between Washoe and Storey Counties. They are: 89434, 89511, and 89521. If the vehicle is based in Washoe County with any of these zip codes, it does need to be tested, and if it's based in Storey County with any of these zip codes it's exempt. The only two counties that require testing for registration and renewal are Clark and Washoe.

## Vehicles requiring a test



Change of ownership

Home built & Specially constructed vehicles

Gray market vehicles

Engine changes

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### Change of ownership -


#### Private party sales:

The buyer is required to obtain the emission inspection, not the seller. The seller is responsible for all required emission equipment being installed and appearing functional.

#### Nevada dealer sales:

On dealer sales, a passing VIR is required to be presented to the buyer along with the Dealer Report of Sale (DRS). In addition, the dealer is responsible for all required emission equipment being present and appearing functional, regardless of the vehicle's age.



<p><b>Some Vehicles Are Exempt From Emission Testing</b></p>	
<p>All diesel vehicles over 14,000 pounds GVWR</p>	<p>Motorcycles            Classic Vehicles or Rods            Old Timers            90 Days            Spouses            36 months            1967 &amp; older</p>

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### Exempt vehicles:

- All diesel vehicles with a Manufacturer's GVWR greater than 14,000 pounds
- Motorcycles
- Apportioned vehicles that are not based in the I/M program areas in Nevada
- Classic Vehicles, Classic Rods, and Old Timers that have been driven less than **5000** miles in the last year
- Transfer of ownership within 90 days of most current passing VIR
- Transfer of ownership between spouses
- All vehicles that will have been registered for less than 36 months
- All vehicles with a model year prior to 1968

# Preparing to conduct an emission test

Is an inspection necessary?



Why Does the Customer want a test?



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It is the inspector's responsibility to make an accurate determination whether an emission inspection is required for registration or renewal.

## Interview your customer using the 'Six Questions'

1. Why do you need a smog?
  - a) It must be for registration purposes
2. Did you just purchase this vehicle from a dealer or private party?
  - a) If purchased from a Nevada dealer, the dealer is required to supply a passing VIR with the Dealer Report of Sale (DRS)
3. How far have you driven the vehicle?
  - a) The inspector needs to confirm that the vehicle is properly warmed up
4. What city do you live in?
  - a) It must be a city where emission test is required
5. What county do you live in?
  - a) It must be a county where a test is required for registration or renewal
6. What is your zip code?
  - a) It must be a zip code that is not an exempt area

**If you encounter any of these vehicles, they need to be brought to the Emission Lab prior to testing:**

**Gray market cars:** These are cars that were never intended to be sold in the USA.

**Engine swaps:** Vehicles that do not have the original year or type of engine.

**Home built or Assembled vehicles:** Kit cars, dune buggies, rock crawlers.

These three types of vehicles need to come to the emission lab, so that we can issue documentation that explains how to properly test these vehicles.

# Information sources



Under hood label is your  
primary information  
source



**RFZ**  
8.2 LITER  
P306-267274

**IMPORTANT VEHICLE INFORMATION**  
General Motors Corporation

**SET PARKING BRAKE AND BLOCK DRIVE WHEELS**

BASE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, AIR CLEANER REVALUED AND ALL ACCESSORIES OFF:

1. CURB IDLE SPEED: ADJUST SPEED SCREW ON FUEL INJECTION PUMP TO SPECIFIED SPEED WITH TRANSMISSION IN SPECIFIED GEAR

2. FAST IDLE SPEED: TURN ENGINE OFF. REMOVE CONNECTOR FROM FAST IDLE SOLENOID. ATTACH INSULATED JUMPER WIRE FROM BATTERY POSITIVE TERMINAL TO SOLENOID TERMINAL TO ENERGIZE SOLENOID. OPEN THROTTLE MOMENTANEOUSLY TO ASSURE SOLENOID PLUNGER IS ENGAGED AND FULLY EXTENDED. START ENGINE AND ADJUST SOLENOID TO SPECIFIED SPEED. STOP ENGINE. REMOVE JUMPER WIRE AND REINSTALL CONNECTOR TO FAST IDLE SOLENOID.

THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO 1980 MODEL YEAR NEW LIGHT DUTY TRUCKS.

**NON-CATALYST**  
EGR/EPR

CURB IDLE SPEED (RPM)	LOW ALTITUDE SPECIFICATIONS	
	MANUAL	AUTOMATIC
FAST IDLE SPEED (RPM)	850 (N)	850 (N)
	800 (N)	800 (N)

FUEL INJECTION TIMING IS PRESET AT FACTORY. ADJUSTMENT TIMING, TIME UP TO 100° REQUIRED.

SEE SERVICE MANUAL, MAINTENANCE SCHEDULE AND EMISSION HOSE ROUTING DIAGRAM FOR ADDITIONAL INFORMATION.

TRANS	VOLTAGE RATIO
MANUAL	.63
AUTOMATIC	.33

THROTTLE POSITION SENSOR ADJUSTMENT (NOT REQUIRED DURING TUNE-UP)

8" WITH GAGE BAR OF .846 INCHES

THIS VEHICLE HAS BEEN DESIGNED FOR PRINCIPAL USE AT LOW ALTITUDE. SEE SERVICE PUBLICATION FOR FURTHER INFORMATION.

PT. NO. 1205142  
PRINTED IN U.S.A.

**RFZ**

**EMISSION HOSE ROUTING**

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The Emission Control label provides information using diagrams, codes, acronyms, and written information.

Where are the Emission Control Labels located on diesel powered vehicles?

8,500-14,000 GVWR-should be located on the engine, normally on the valve or timing cover  
up to 8,499 GVWR-should be located in the engine compartment

Information needed from Emission Control Label

Catalyst(s)

Particulate Filter/Trap

EGR

Manufacturer's Advertised Horsepower

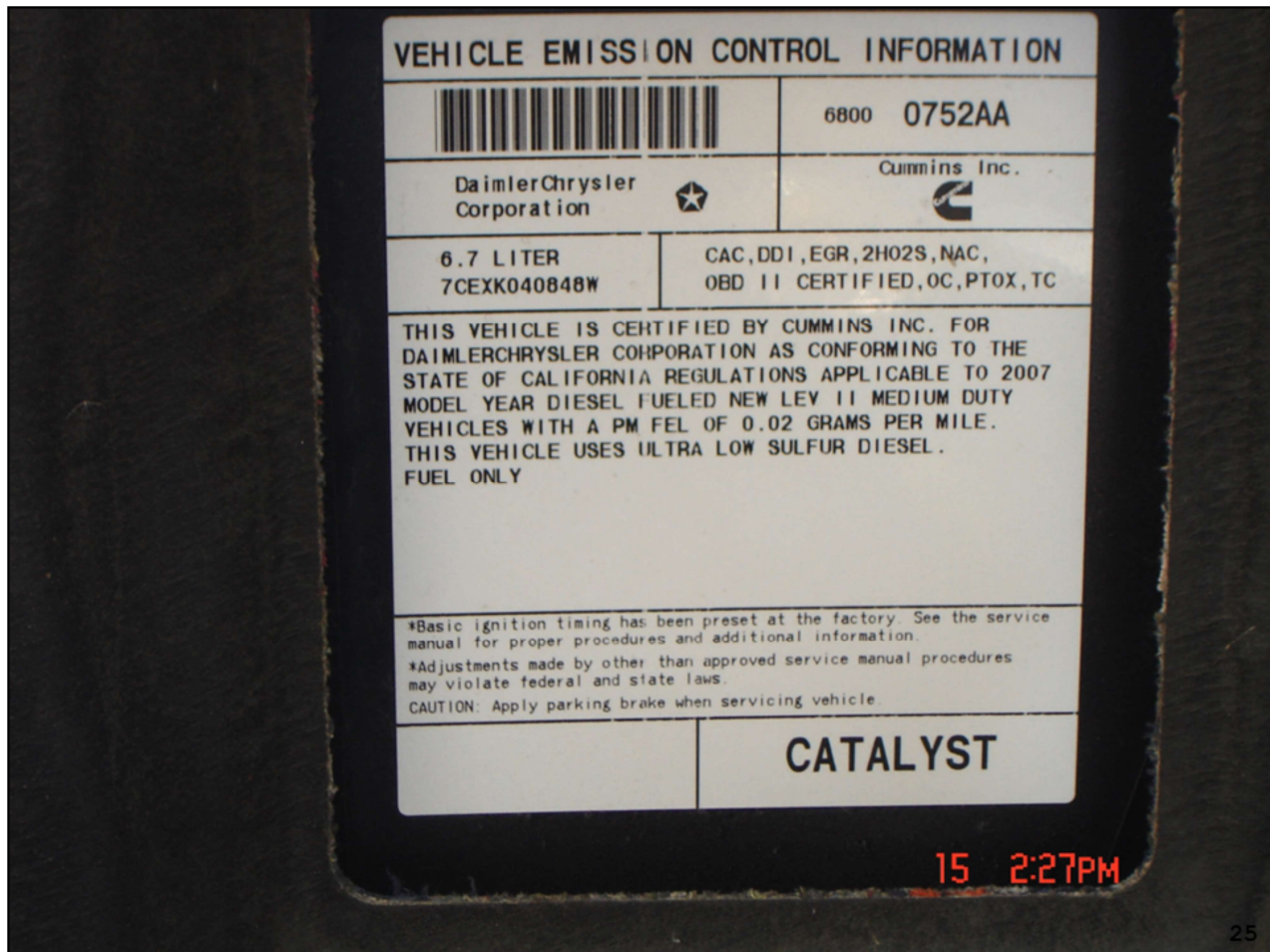


What Emission control devices are required for this vehicle?

Catalyst

What is the Advertised Horsepower?

195 hp



What Emission control devices are required for this vehicle?

Catalyst

Particulate Filter/Trap (PTOX)

EGR

How do you handle missing emission label or a label that doesn't list the advertised horsepower?

If the label is missing, you'll determine the required equipment by using your Emission Device Application Guide or Alldata. For the horsepower, you'll need to look in your Specification Guide.



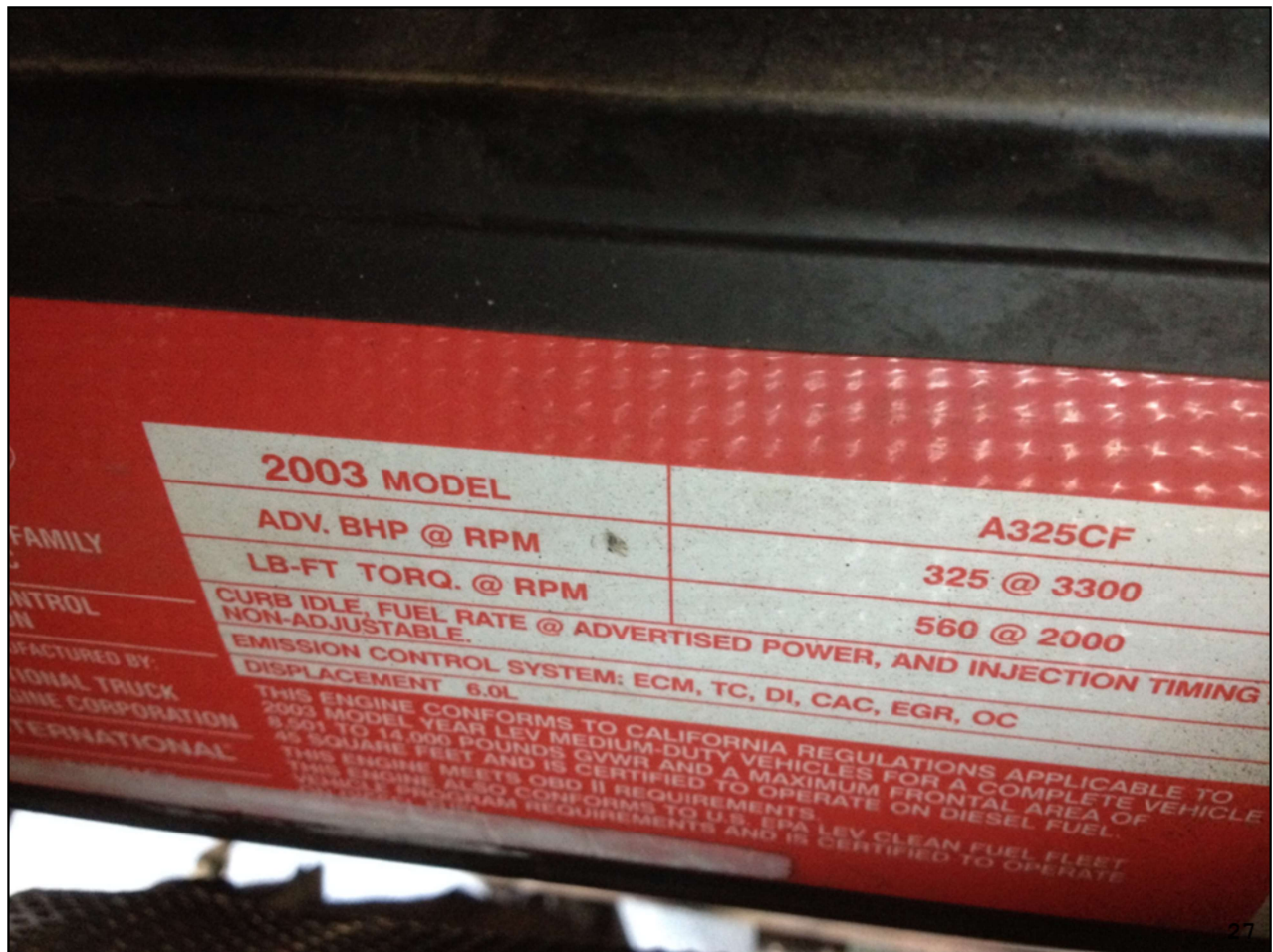


What Emission control devices are required for this vehicle?

- Catalyst
- Particulate Filter/Trap (PTOX)
- EGR

Where do we find the Advertised Horsepower?

- 350 hp



What Emission control devices are required for this vehicle?

- Catalyst
- EGR

Where do we find the Advertised Horsepower?

- 325 hp



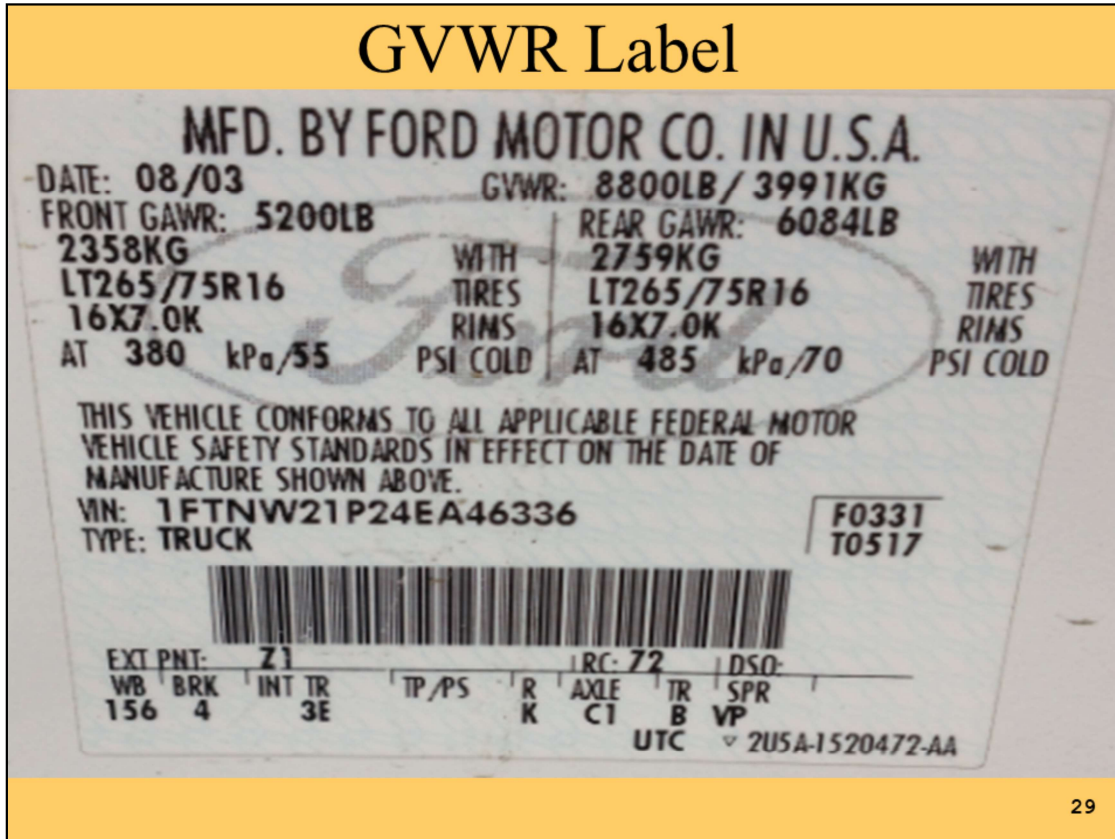
This label is from a 2004 Ford F250, as this is a heavy duty vehicle this isn't the only label that you will need to obtain all the information needed to complete the emission test.

What information is missing? Mfgs. Advertised HP

Where would you look to find the Mfgs. Advertised HP? Label found on the engine (refer to slide #26, #27)



# GVWR Label



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This can normally be found on the drivers door post.


Remember when you read a Gross Vehicle Weight Rating sticker do not use the Gross Axle Weight Rating!

Be sure to use " POUNDS" not KILOGRAMS !!

Shows date of manufacture and other information.

If there is no GVWR you will need to call the Emission Lab in your area.

# Exception Vehicle Report

State of Nevada Department of Motor Vehicles Emissions Exception Vehicle Report	
	
<b>EXCEPTION VEHICLE REPORT</b>	
Auditor: JOHN LEE Vehicle Type: ENGINE SWAP	Date / Time: 06/15/2015 09:09:48 County: WASHOE
<b>VEHICLE INFORMATION</b>	
Vin: 1GT0C24F2W854290 Make: GENERAL MOTORS CORP.	Year: 1998 Weight Range: Diesel Light Duty
<b>ENGINE INFORMATION</b>	
Serial #: 18726543 Make: GM Year: 1998	Cylinders: 8 Model: 6.5 LITER Displacement: 6.5
<b>VEHICLE REGISTRATION INFORMATION</b>	
Year: 1998	Make: GENERAL MOTORS CORP. Model: SIERRA
<b>TEST VEHICLE FOR THE FOLLOWING:</b>	
1968-1980 Model Yr 1981-1995 LDG Model Yr 1995 or newer HDG Model Yr	1996 or newer Model Yr Light Duty Diesel
Air Injection	DLC: Yes
Catalyst	MIL: No
ECR	Catalyst LDD: No
Fuel Inlet Restrictor	EGR System: No
Fuel Cap	Carburetor Vent System: Yes
	Fuel Cap LDD: Yes
	RFQ Advt Rated HP: No
	Dynamometer Speed: 40
	Dynamometer HP: 30.0
EMISSION TEST VEHICLE AS: DIESEL	

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This is an Emissions Exception Vehicle Report.

This takes the place of the Vehicle Emission Control Information label.

We issue these to replace a missing under hood label, for assembled vehicles, and for engine swaps. On diesel vehicles, it's usually for a missing label.

If you have any questions on testing one of these vehicles, contact your local State of Nevada Emission Lab.

Before beginning the Emission Inspection portion of the test be aware of the following items:

The vehicle **MUST** be tested in the condition it was received.

Conduct the test with **ALL** accessories turned off and with the wheels properly chocked.

Keep the engine running at **NORMAL OPERATING TEMPERATURE**. Using the temperature gauge, confirm that the engine is warmed up but not overheating.

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Properly chock the wheels

Turn off all accessories

Position the vehicle on the dyno

Properly restrain the vehicle using the dyno manufacturer's guidelines

May place a cooling fan about one foot in front of radiator

Diesel vehicles need to be emission tested for registration if they are:

1968 to current model year

MGVWR is less than 14,001 pounds

A resident of the testable areas of Clark or Washoe County

But not if:

The vehicle has been registered less than three 12-month registration cycles

The vehicle is based outside the testable areas of Clark or Washoe County

## Known Problem Vehicles




### Known testability issues

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The only problem vehicles that you're likely to get at your diesel emission inspection station would be all-wheel-drive and traction controlled vehicles. If you attempt to emission test an all-wheel-drive diesel vehicle on a single-axle dyno, the vehicle will likely jump right off of the dyno, causing injury and damage. Even though most traction-controlled vehicles have a switch to defeat the traction control system, manufacturers recommend that you not test these vehicles on a single axle dyno. Extensive damage can occur even with the traction control system turned off.

# Visual inspections



## Tampering

What is tampering anyhow?

Does this mean you have to look for every single emission device possible?



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Under NAC445B.452, tampering is defined as: Rendering inoperative or intentional mis-adjustment of any motor vehicle device or element of design intended to control exhaust emissions.

Let's examine what this means. If any part of any emission system is no longer working properly, Nevada considers the system tampered. The Nevada emission test doesn't require you to examine every emission system that is installed on the vehicle, only systems that are listed on the VIR. Remember if all of the parts of the system are not installed and connected, the system does not appear functional, therefore it is tampered.

On 1968 through 1980 diesel vehicles the only equipment we visually inspect is the fuel cap(s).

On 1981 and newer diesel vehicles, in addition to the fuel cap we visually inspect for: catalyst(s), particulate filter/trap, EGR system, and crankcase vent system.

# Information sources

## Application guides & Repair Manuals



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Application guides, specifications, and repair information are available in various forms.

1. Paper bound books
2. CD rom disks
3. Online services
4. Motor reference guide, (ph) 1-800-426-6867, or contact your MATCO dealer
5. Alldata 1-800-697-2533
6. Mitchell On-Demand and Mitchell Pro-Demand, (ph) 1-888-724-6742 or contact your Snap-On dealer
7. Printed Mitchell 1 reference guide, (ph) 1-888-724-6742, or visit [www.mitchell1.com](http://www.mitchell1.com)

# Visual inspections

## Catalytic Converters What are we looking for?



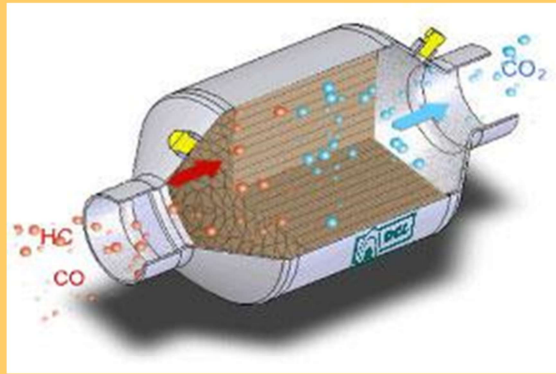
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Under the correct temperature conditions, the noble metals in the catalytic converter will convert hydrocarbons and oxygen to CO<sub>2</sub> and water. Catalytic converters used differ from the catalytic converters used in gasoline applications, and they cannot successfully be substituted for each other.

Newer diesel vehicles are frequently equipped with a particulate filter or particulate trap. These can be in front of, behind, or in the same housing as the catalytic converter.

The catalyst tamper inspection is the same as other tamper inspections. Is the device installed, and does it appear to be functional? The label (or application guide) will tell you how many and what type of catalyst is required. Your job is to make an accurate determination whether the catalyst is installed and appears functional.

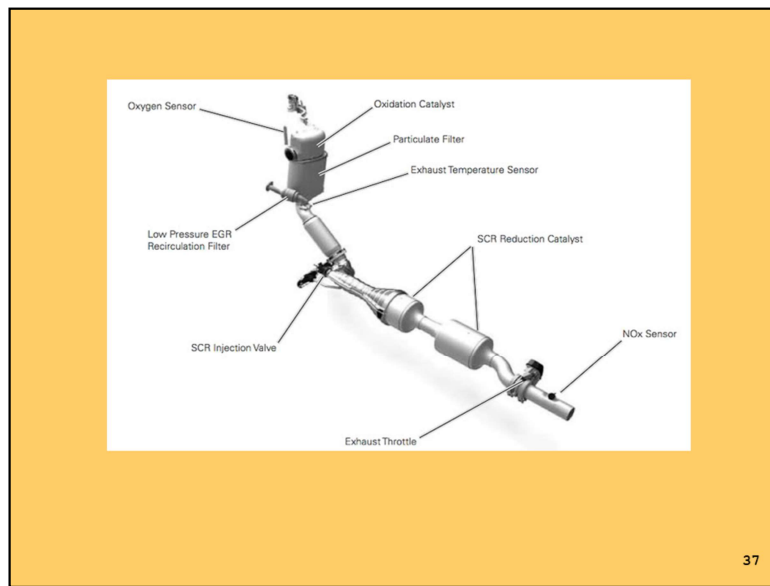
You are required to use whatever information sources that you find necessary to make an accurate determination for the required devices and configuration for a vehicle's catalytic converter(s) and particulate filter or particulate trap. Don't forget, you will be certifying that the entire system is installed and appears to be functional.



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The most commonly used catalytic converter is the **Diesel Oxidation Catalyst (DOC)**. DOCs contain Palladium / Platinum with Aluminum oxide, which serve as catalysts to oxidize the hydrocarbons and carbon monoxide with oxygen to form carbon dioxide and water.





Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF) - Passat



Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF) - Ford F250 -2008



What can you see in this picture?

- Diesel Oxidation Catalyst (DOC)

How many Catalytic Converters?

- One Oxidation Catalyst (front) / One Particulate Filter (rear)

# Visual inspections

## Particulate Filter / Trap

What are we looking for?



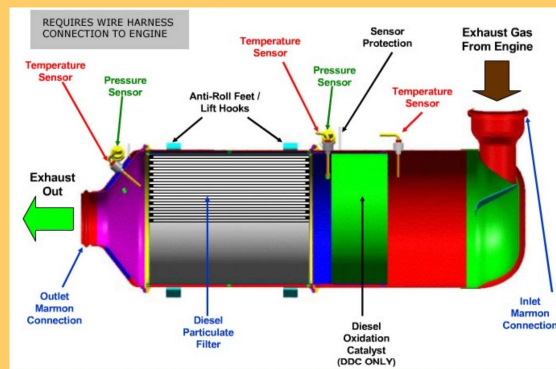
40

What is a DPF?

The **Diesel Particulate Filter** (DPF) is integrated into modern diesel engine exhaust systems, designed to trap and safely remove particulate soot matter from the exhaust gasses of diesel engines. The aim of the filter is to remove a minimum of 80% particulate soot matter from the diesel engine exhaust gasses before they exit into our atmosphere.

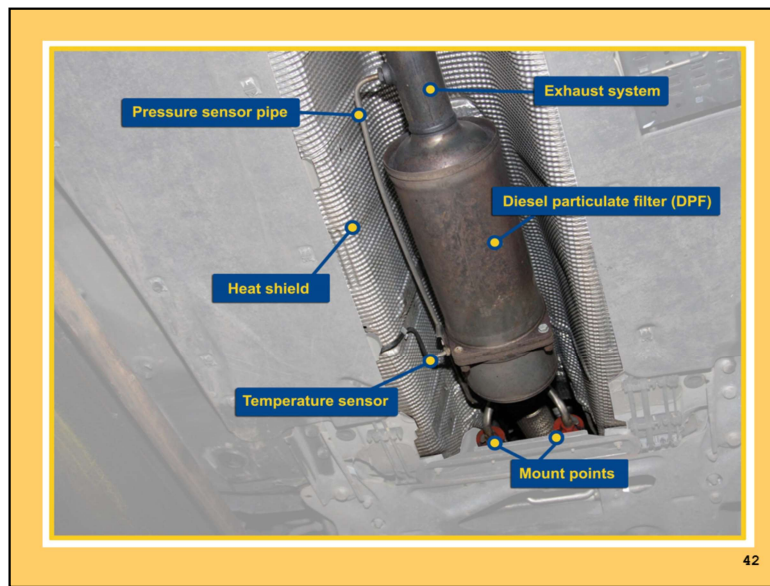
Nearly all diesel cars, vans, trucks and other commercial vehicles, built after 2006 have a DPF (Diesel Particulate Filter). Quite a few vehicles have had them fitted since 2001 including Fiat, Peugeot and Citroen.

Being a filter, its job is to capture and store soot particles produced during the engine combustion process from entering the atmosphere, then every so many miles the engine will enter a regeneration cycle which is supposed to clean the filter by burning the soot and turning it into ash.



41

Diesel Particulate Filter (DPF) and Oxidation Catalyst (OC) integrated in one system.



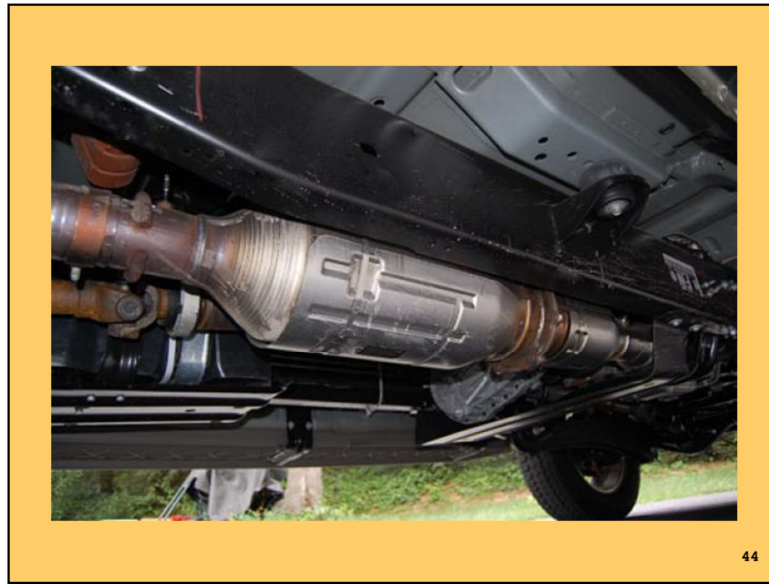
Diesel Particulate Filter (DPF) - Stand alone



43

### Diesel Particulate Filter (DPF) - 2007 Chevrolet Silverado 2500HD

After pre-treatment in an upstream oxidizing catalyst, exhaust gas passes through the diesel particulate filter (DPF) where particulate matter (soot) is captured and held in a honeycomb cell structure.



Diesel Particulate Filter (DPF) and Oxidation Catalyst (OC) that work together to remove 97% of particulate matter (soot) -2008 Ford F250





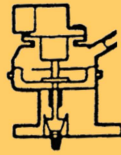
45

Diesel Particulate Filter (DPF) - Ford



Diesel Particulate Filter (DPF) - 2008 Jeep Grand Cherokee

## Visual inspections



EGR system

What are we looking for?



47

### EGR System

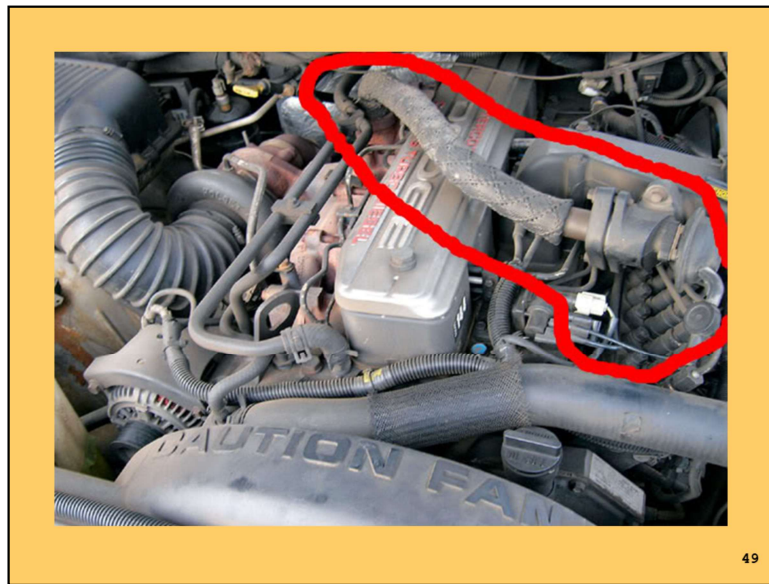
Oxides of Nitrogen (NOX) emissions have been a big problem on diesel engines. One method to control NOX emissions is to recirculate some exhaust back into the air intake, a system called Exhaust Gas Recirculation (EGR). EGR reduces the combustion temperatures to below 2,500 degrees Fahrenheit, which prevents the formation of NOX emissions.

If the EGR system becomes inoperative, NOX emissions increase. Nevada test procedure measures opacity, not NOX emissions, so the tamper inspection of the EGR system is critical.

Just like the catalyst and particle filter, you are required to use whatever data sources are required to make absolutely certain that the device is installed, and the system appears to be functional.



**EGR Valve**  
Chevrolet and GMC Duramax



## EGR Valve

Dodge Ram 3500 Cummins



**EGR Valve**  
VW 1.9 Liter



51

## EGR Valve

Ford Super Duty 6.0 Liter (2004)





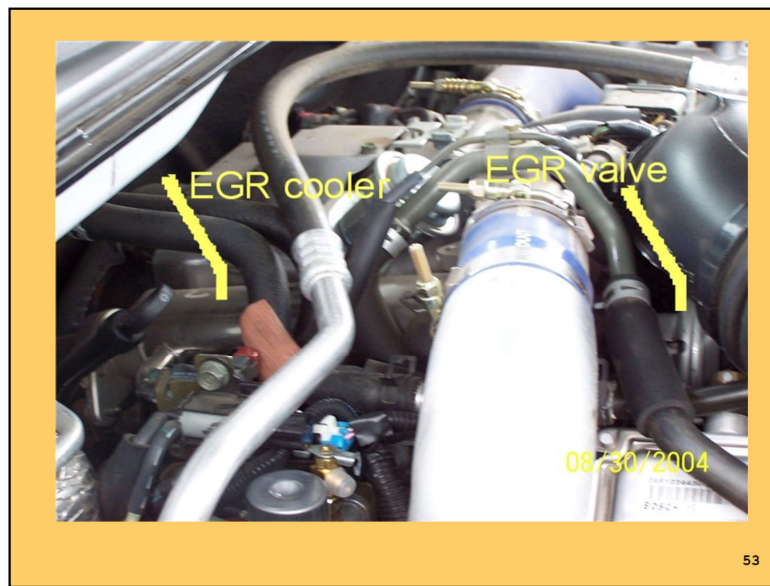
## EGR Coolers

Ford Super Duty 6.0 Liter (2003-2007) Factory (OEM) EGR Cooler on (left) Manifold.

- Tubing is round

Aftermarket EGR Cooler on (right) Manifold.

- Tubing is square



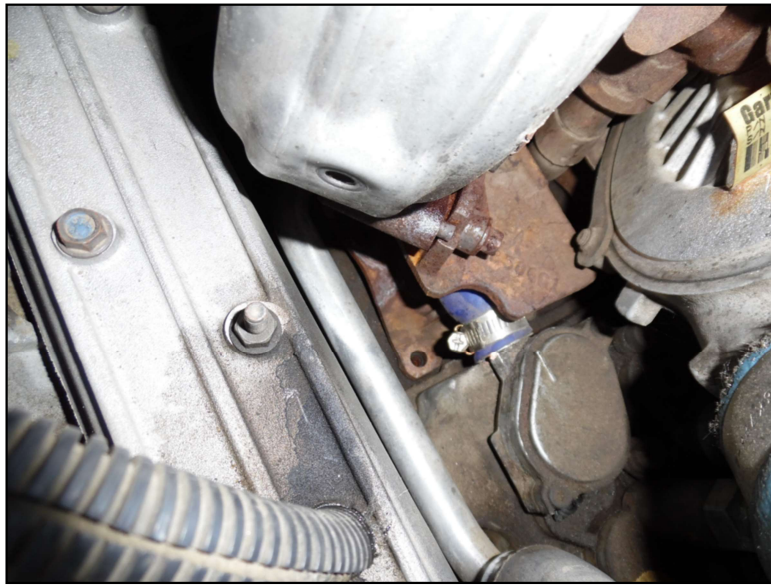
53

**EGR Valve and EGR Cooler**  
Chevrolet and GMC Duramax



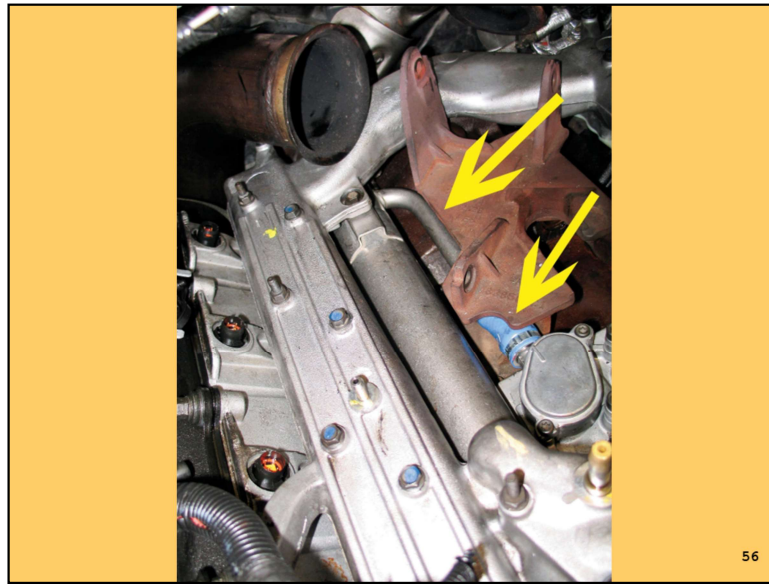
### **EGR Cooler bypass**

Ford Super Duty 6.0 Liter (2003)



## **EGR Cooler bypass**

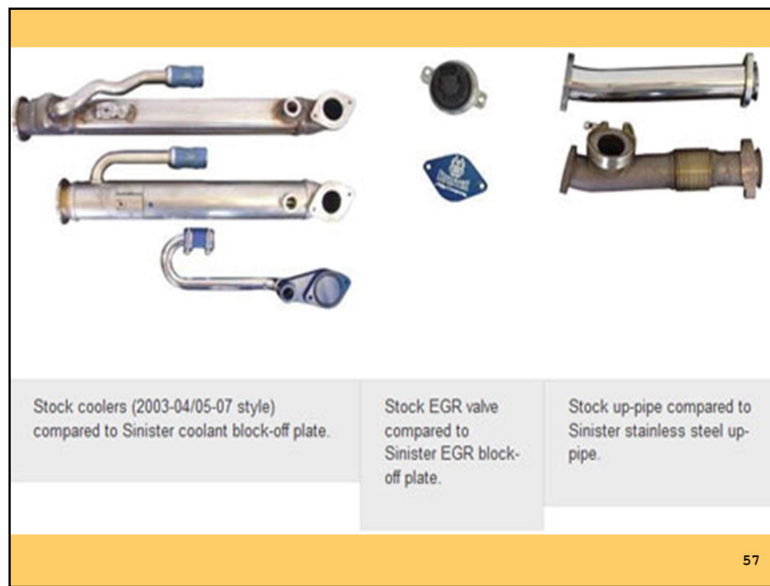
Ford Super Duty 6.0 Liter (2003)



56

## EGR Cooler

What EGR Cooler should look like.



### **EGR Coolers / EGR block-off plate**

Stock coolers compared to coolant block-off plate.

Stock EGR valve compared to EGR block off plate.

Stock up-pipe compared to stainless steel up-pipe.

# Visual inspections

Crankcase vent system  
What are we looking for?



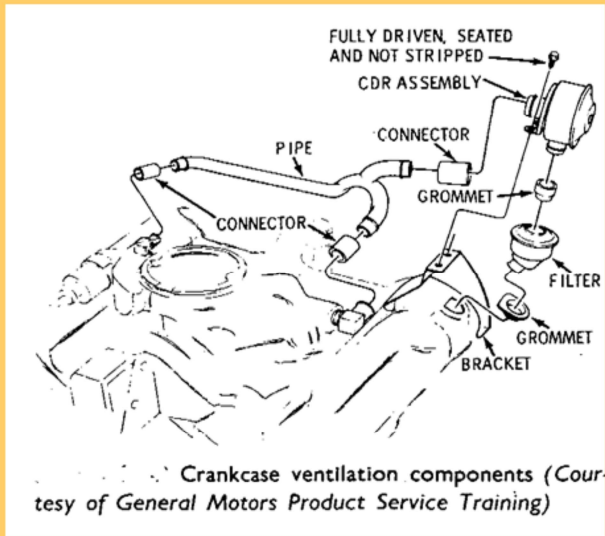
58

All diesel engines have some sort of crankcase ventilation system. Some of the oldest systems vent to atmosphere. Newer systems capture the gasses and direct them back into the air intake so that they can be burned.

We need to make sure that hoses, fittings, clamps, etc., are all installed so that the crankcase fumes go where the engine manufacturer intended.



# CRANKCASE VENTILATION

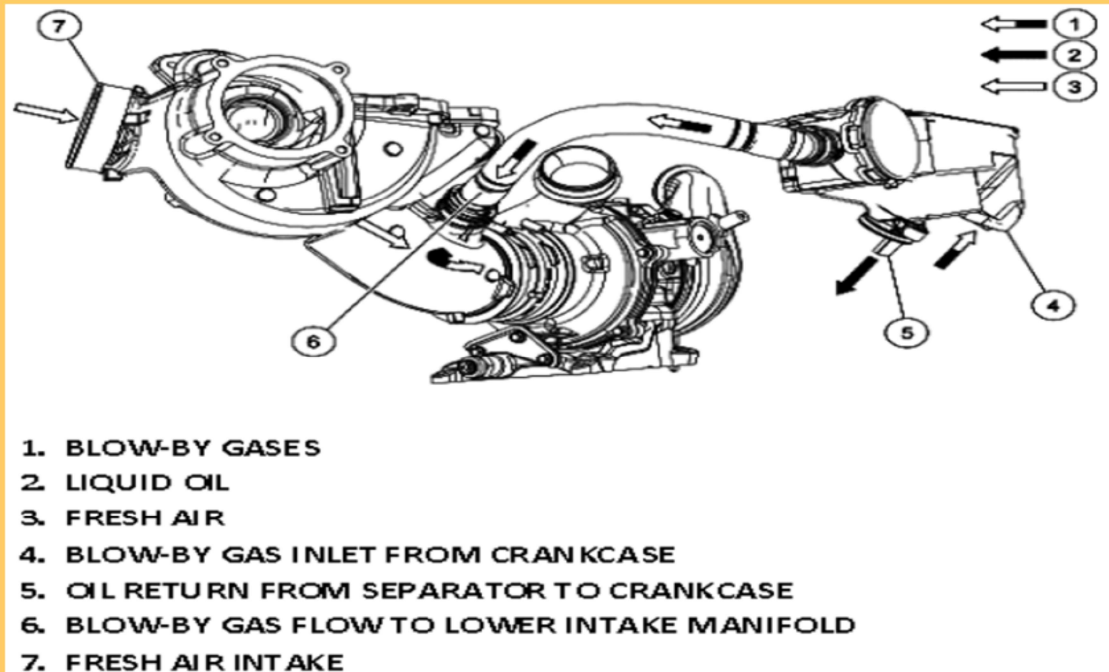


- Crankcase Depression Regulators are sometimes used in place of Positive Crankcase Ventilation Systems

59

They both perform the same basic task that is to draw blowby gasses out of the crankcase and mixing them with the incoming air. Both systems are designed to maintain a specific pressure in the crankcase, too much pressure can cause oil leaks, too little pressure and oil can be drawn into the engine air intake. REMEMBER, UNLIKE A GASOLINE ENGINE A DIESEL CAN ACTUALLY RUN ON IT'S OWN ENGINE OIL AND SINCE YOU CAN ONLY SHUT IT DOWN BY DEPRIVING IT OF FUEL IF SOMETHING GOES WRONG WITH THIS SYSTEM IT CAN ACTUALLY RUN UNTIL IT RUNS OUT OF MOTOR OIL!!!

# CRANKCASE VENTILATION



60

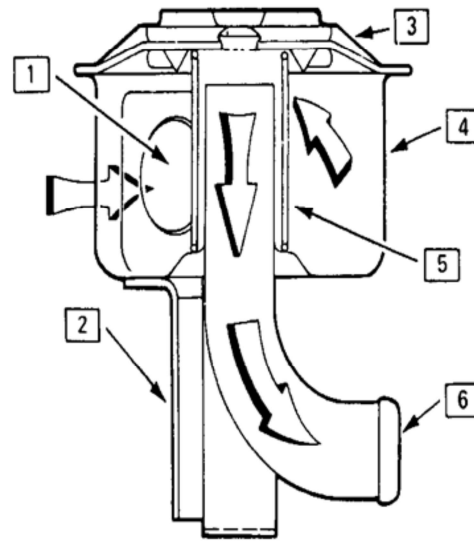
## Dodge Cummins 6.7 Liter

The crankcase ventilation system, purges crankcase gases to intake manifold. The crankcase ventilation system consists of 5 main elements, (1) expansion chamber separator, (2) cyclonic oil separator unit w/integral pressure limiting valve, (3) stainless steel check valve, (4) oil collection chamber and (5) pressure regulating valve.

# CRANKCASE VENTILATION

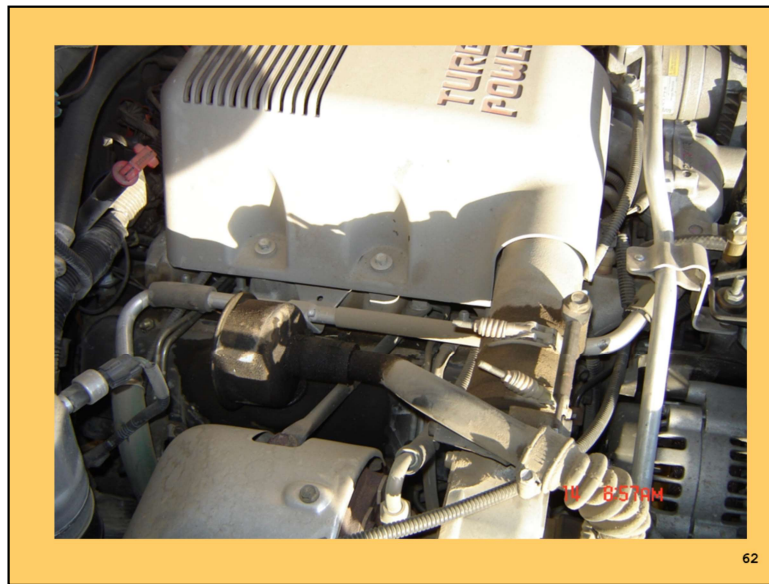
## CRANKCASE DEPRESSION REGULATOR VALVE V-TYPE DIESEL ENGINE

- |   |  |
|---|--|
| 1 INLET PORT (2)<br>(GASES FROM)<br>CRANKCASE | 4 BODY   |
| 2 MOUNTING<br>BRACKET                         | 5 SPRING                                       |
| 3 COVER<br>DIAPHRAGM                          | 6 OUTLET TUBE<br>(GASES TO INTAKE)<br>MANIFOLD |



CRR valve (Courtesy of Oldsmobile Division)

Crankcase Depression Regulator Valve V-Type (Oldsmobile)



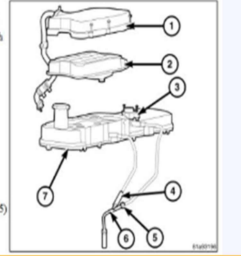
**Crankcase Ventilation**  
GMC 6.5 Liter Duramax

To comply with engine emissions regulations, a CCV (Closed Crankcase Ventilation) system has been developed for the 6.7L Cummins diesel. The CCV system recycles crankcase ventilation (blow-by) gases from the breather assembly back into the engine intake airflow to be used for combustion. The crankcase ventilation system uses a coalescing filter (2) which captures and filters crankcase blow-by gases and then returns oil directly to the sump.

The CCV system contains the following components:

- Valve Cover Assembly (7)
- Breather Filter (2)
- Breather Filter Cover (1)
- Crankcase Pressure Sensor (3)
- Crankcase Differential Regulator (CDR) Valve; a part of the breather filter cover (1)

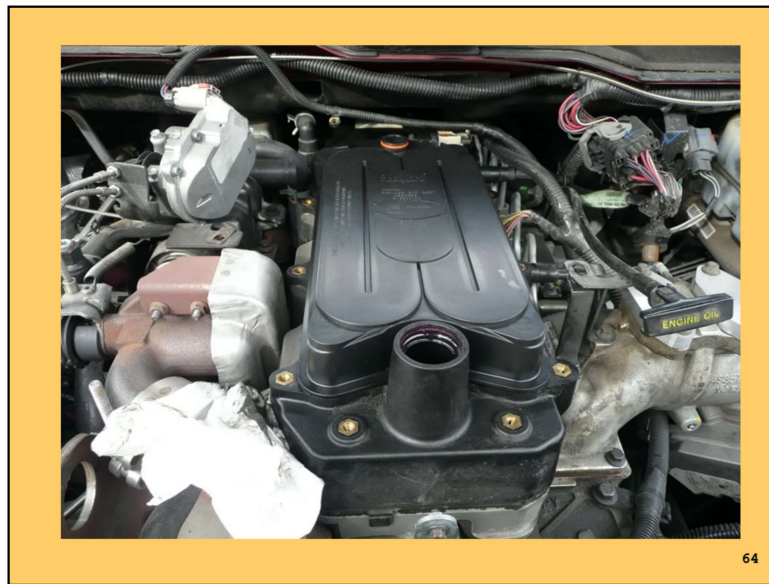
The valve cover assembly (7) is made of a composite material. The cover has a recessed area for the breather filter and passages for oil draining from the breather filter, back to the crankcase. The drain tubes have one-way check valves (4), (5) and (6) that prevent oil from being forced up the tubes by excessive crankcase pressure.



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## Closed Crankcase Ventilation system (CCV)

Dodge Cummins 6.7 Liter



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## **Closed Crankcase Ventilation system (CCV)**

Dodge Cummins 6.7 Liter



### **Closed Crankcase Ventilation system (CCV)**

Dodge Cummins 6.7 Liter



# Visual inspections

## Diesel Testing

### Fuel Cap

What are we looking for?



66

The fuel cap is the last of the tamper inspections. The cap must be the correct cap, must fit properly, and the seal must be good. You will be certifying that the caps for all tanks that supply the engine (including dual and auxiliary tanks) properly seal.

Generator fuel tanks and supply tanks for construction equipment are not subject to this inspection.

## Visual inspections

### Capless Fuel Fillers

Newer vehicles are frequently equipped with capless fillers



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This 2014 Ram pickup has a capless fuel filler. The dustcap that the inspector is holding is NOT required to be installed on the vehicle. It is only used during vehicle assembly, and was supposed to be removed during pre-delivery inspection. Unless you see bent, broken, or damaged filler, enter it as a pass.



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### Pass or Fail?

- **Fail** - rubber seal is split and there's a chunk missing.

## Fuel cap failure



State of Nevada  
Department of Motor Vehicles  
Vehicle Inspection Report  
OVERALL TEST RESULT: FAILED

VEHICLE INFORMATION

Year: 2011	Cylinder: 4	County: WASHOE
Make: FORD	Color: BLACK	Zip: 89401
Model: F150	Fuel: DIESEL	Owner: 19123
License Plate Number: 1F7F0E0E110000000	Plate: 4000	Inspection Type: INITIAL

My Admitted Inspection: 478  
 Dynamometer Speed: 40  
 Dynamometer Horsepower: 30  
 Dynamometer Fueling: 0.1

Visual Inspection Results

Catalytic: PASS	Exhaust: PASS
Oil Pressure: PASS	Exhaust System: PASS
Exhaust Valve System: PASS	Exhaust Noise: PASS

Emission Test Results

Exhaust Test Results: PASS	Exhaust Noise Test Results: PASS
----------------------------	----------------------------------

STATION INFORMATION

Station Number: WEA000	Test Date: 07/15/2015 10:00:14
Inspector Number: 8000000001	Test Time: 00:00
	Station Test Fee: \$0.00
	VIS Fee: \$0.00
	Total Fee: \$0.00

Test results have been forwarded electronically to the Department of Motor Vehicles. Visit dmvr.com for more information.

*E00000053311  
7-15-2015  
Joe Inspector*

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The only time you may write on a Vehicle Inspection Report is to sign off on a fuel cap failure. Once you have verified that the fuel cap has been replaced with a correct, properly sealing cap, you will then write your inspector license number, the date, and your signature next to the fuel cap failure.

Make sure that your customer understands that they will need to mail or bring the VIR, renewal form, and payment to DMV. Renewal cannot be processed online, since the electronic VIR still shows a fail result. You do not need to be the inspector or station that originally inspected the vehicle. Any inspector can sign off a fuel cap failure, including Emission Technicians at the emission lab.



COMPLIANCE ENFORCEMENT DIVISION  
555 WRIGHT WAY  
CARSON CITY, NV 89711  
Reno/Sparks/Carson City (775) 684-4DMV (4368)  
Las Vegas Area (702) 486-4DMV (4368)  
[dmv.nv.gov](http://dmv.nv.gov)

**APPROVED EMISSION TESTING EQUIPMENT**  
**DIESEL VEHICLES UNDER 14,001 POUNDS**

**DYNAMOMETERS**

Manufacturer Name	Contact Information	Approved Dynamometer Models
MD Mustang Dynamometer	2300 Pinnacle Pkwy Twinsburg, Ohio 44087 Ph: (330) 963-5400 Fax: (330) 425-3310	MD – 250 MD – AWD – 500 (SE & DE) MD – 750 MD – 1000 MD – 1100 (SE & DE) MD – 1750 (SE & DE)
Superflow Dynamometer	3512 N. Tejon Colorado Springs, CO 80907 Ph: 800-471-7701 Fax (949) 786-3966	849

**OPACITY METERS**

Manufacturer Name	Contact Information	Approved Opacity Meter Models
Bosch Opacity Meters	H. G. Makelim Co. 219 Shaw So San Francisco CA 94080 Ph: (650) 873-4757 Fax: (650) 873-8685	RTT 100
Wager Opacity Meters	Robert Wager Corporation 570 Montroyal Road Rural Hall, N.C. 27045 Ph: 1-800-562-7024 Fax: (336) 969-6375	6500

**OPACITY METER AND DYNAMOMETER SYSTEM**

Manufacturer Name	Contact Information	Approved Models
Worldwide Environmental Products	1100 W. Beacon St. Brea, CA 92821 United States Ph: 800-832-SMOG Fax: (714) 990-3100	6000D, only Clayton Roller Sets – minimum 7,000 lb. Axle Rating

This is a list of Dynamometers and Opacity Meters certified by the state. Before purchasing new equipment, obtain the current list from the DMV website or the emissions lab in your area.

## **DIESEL TESTING PROCEDURES**

1. Power up the Dynamometer and calibrate as per the equipment manufacturers instructions
2. Power up the Opacity Meter and calibrate as per the equipment manufacturers instructions
3. Determine the vehicles GVWR
4. Check the vehicles engine oil level, coolant level, automatic transmission fluid level (if applicable)
5. Check the vehicles tires for proper air pressure and condition
6. If any item above is not acceptable, do not proceed
7. Position the vehicle on the dynamometer as per the equipment manufacturers instructions

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### **NAC 445B.589 Testing of light-duty motor vehicles powered by diesel engines: Procedure; certificate of compliance; effect of failure. (NRS 445B.785)**

1. An inspector shall comply with the following procedure when testing a light-duty motor vehicle powered by a diesel engine:
  - (a) The test procedure must include, without limitation, a preparation phase, a tampering inspection phase and an opacity test phase.
  - (b) In the preparation phase:
    - (1) The vehicle must be placed on a dynamometer, the transmission must be placed in neutral and the vehicle must be properly restrained to prevent any rolling motion.
    - (2) The inspector may place an auxiliary cooling fan into position approximately 12 inches in front of the cooling system of the motor vehicle.

8. After the vehicle is properly positioned, tie it down according to the equipment manufacturers instructions
9. Position wheel chocks in front of the wheels that are not on the dynamometer (2 axle dyno, no wheel chocks)
10. You may, if desired, place a cooling fan approximately one foot in front of the radiator
11. Attach the smoke opacity meter according to the equipment manufacturers instructions
12. If the vehicle has dual exhaust, the opacity meter must be attached to the exhaust pipe displaying the highest observed opacity
13. If an exhaust venting system is used, the opacity meter must be attached so that all the exhaust from the test pipe is passed through it
14. Complete the tampering inspection
15. Verify the vehicle is at operating temperature. If it is not, it must be operated until it reaches normal operating temperature

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(3) The inspector shall then affix a smoke opacity meter which has been calibrated and zeroed to the exhaust system of the vehicle according to the recommendations of the manufacturer of the meter. Vehicles with dual exhaust configurations must have the smoke opacity meter attached to the exhaust pipe displaying the highest observed opacity.

(4) If an exhaust removal system is used, it must be installed so that all of the exhaust from the vehicle being tested is passed through the smoke opacity meter.

(c) In the tampering inspection phase, the inspector shall visually inspect:

(1) All vehicles with a model year of 1981 or newer to ensure that all equipment for emission control which is listed on the manufacturer's emission label is present and appears to be operational; and

(2) All vehicles to verify the presence of a properly installed fuel cap.

(d) During the opacity test phase, the inspector shall:

(1) Verify that the vehicle is at normal operating temperature before beginning the test. If the vehicle has cooled down below its normal operating temperature during its placement on the dynamometer, it must be operated until its normal operating temperature is reached.

## 16. Test vehicles according to the chart

	SPEED	LOAD
Number of Cylinders	(+ or – 4 Miles per hour)	(+ or - 1 Horsepower)
4	40	7.0
5 or 6	40	15.0
8	40	30.0

73

Test vehicles with varying engine sizes under the following speed and load conditions:

***5 cylinders are tested as a 6 cylinder***



17. For safety, confirm that **NO** customers are standing around or behind the vehicle
18. Maintain the designated speed and load conditions for 10 seconds
19. Store and print the results
20. Issue a Vehicle Inspection Report indicating the results of the test
21. A printout from the opacity meter must be provided with the Vehicle Inspection Report
22. If the vehicle passes both the tampering inspection and the opacity test, the overall result will be pass.
23. If the vehicle fails either the tampering inspection or the opacity test, the overall result will be fail
24. A vehicle which fails the tampering inspection phase or the opacity test must be repaired and retested
25. The only item that can be signed off by the inspector is a fuel cap failure once a properly fitting new cap has been installed

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The inspector is required to accelerate to and maintain 40 miles per hour for 10 seconds, then store and print the opacity reading. The printed opacity reading is to be attached to the printed VIR. The VIR is not complete or valid without the opacity printout.

The inspector shall issue the vehicle inspection report indicating the results of the test. The test result will be pass if the vehicle passes both the tampering inspection and the opacity test phase. Standards for opacity are set forth in NAC 445B.576. A vehicle which exceeds the opacity standards or which fails the tampering inspection will show an overall result of fail, and the inspector shall issue a vehicle inspection report indicating the failure.

A vehicle which fails for tampering or opacity must be repaired and retested, except gas cap.

Once you have verified that the fuel cap has been replaced with a correct, properly sealing cap, you will then write your inspector license number, the date, and your signature next to the fuel cap failure.

## 26. The standards for opacity are :

No more than 30% when the test is being performed at an elevation less than 4,000 feet above sea level

or

No more than 40% when the test is being performed at an elevation more than 4,000 feet above sea level

What altitude is Las Vegas?

The standard is?

What Altitude is Reno?

The standard is?

75

What altitude is Las Vegas?

- Below 4,000 ft.

The standard is?

- 30% max

What Altitude is Reno?

- Above 4,000 ft.

The standard is?

- 40% max

## Importance of securing vehicle on dynamometer!!!



Video

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### To show Video's:

- Right click on Video at bottom of Slide
- Click on Open Hyperlink from list
- Once file is open choose video

### Video Content:

- Example of various opacity levels.
- Examples of how dangerous a dyno can be.


I:\Emissions\Training and Tests\Diesel Class\dyno videos

## Generate Diesel VIR




77

Click on PDF to open Inspector Gateway



State of Nevada  
Department of Motor Vehicles  
Online Diesel Test Program



### Inspector Gateway

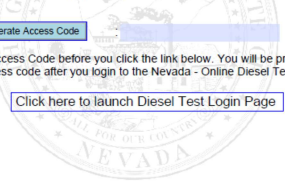
Station Name : JIFFY LUBE 2942  
License Number : EPES00029234  
Station Address : 55 E PATRIOT BLVD  
RENO

**Important Notice:**  
Only emission inspectors licensed by the DMV, State of Nevada is allowed to use this gateway to access the Nevada - Online Diesel Test Program. You are authorized to use the gateway to access the Nevada - Online Diesel Test Program only from the Emission Station listed above and you should be physically present at the station address listed above.

[Generate Access Code](#)


**Note:** Get your Access Code before you click the link below. You will be prompted for the above access code after you login to the Nevada - Online Diesel Test Program.

[Click here to launch Diesel Test Login Page](#)




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Click on *Generate Access Code*



**State of Nevada**  
Department of Motor Vehicles  
Online Diesel Test Program



**Inspector Gateway**  
  
Station Name : JIFFY LUBE 2942  
License Number : EPES00029234  
Station Address : 55 E PATRIOT BLVD  
RENO  
**Important Notice:**  
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Generate Access Code




1407861056640

**Note:** Get your Access Code before you click the link below. You will be prompted for the above access code after you login to the Nevada - Online Diesel Test Program.

Click here to launch Diesel Test Login Page


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Highlight access code and copy, so it can be pasted in later in the process  
Click on Launch Diesel Test Login Page

### State of Nevada Emissions System

Thank you for using the Nevada DMV Emissions System. If you are a first-time user, you may wish to review the [Basic Instructions and FAQs](#) below.




REGION: UAT

User Logon Id:

Password:

[Forgot Password](#) [Change Password](#)



This web site uses industry-standard SSL encryption to protect your privacy online. Secure pages are marked by the lock symbol near the bottom of your screen. We hope you will take advantage of the convenience DMV Online Services offer with complete confidence in their security. See also [Credit Card Security](#) and the [Nevada Internet Privacy Policy](#).

#### •FAQs - Frequently Asked Questions

**What kind of information do I need in order to obtain an emission test printout?**  
To obtain a test record, the user may enter vehicle, inspector or station information.

**What websites are used to obtain vehicle technical service bulletins, recall and DLC information?**  
Recall information: <http://www-odt.nhtsa.dot.gov/cars/problems/recalls-recallsearch.cfm>  
<http://www.epa.gov/otaq/recall.htm#current>

Diesel Inspector login page to the VID

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**REGION: UAT**

User Logon Id: MEI00379

Password: \*\*\*\*\*

[Forgot Password](#) [Change Password](#)

This web site uses industry-standard SSL encryption to protect your privacy online. Secure pages are marked by the lock symbol near the bottom of your screen. We hope you will take advantage of the convenience DMV Online Services offer with complete confidence in their security. See also [Credit Card Security](#) and the [Nevada Internet Privacy Policy](#).

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Recall information: <http://www-odn.nhtsa.dot.gov/cars/problems/recalls/recallsearch.htm>  
<http://www.epa.gov/otaq/recall.htm#current>

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Enter Inspector MEI# for User Logon ID  
Enter Inspector Password  
Click Submit



Nevada

DMV Nevada Department of Motor Vehicles

EPA

**Emissions**

**Station Selection**  
Please enter the Access code to proceed!

Access Code:

3/22/2014 9:15 AM

[Nevada Emissions Control Program](#) [Other states program status - OBD Clearinghouse](#)  
[National OBD Clearinghouse](#) [EPA AAMVA ASA](#) [List of Emission Stations](#)

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Click in Access Code area and paste access code in that was copied from Slide#73  
Click Continue

**Emissions**

**Station Selection**  
Please enter the Access code to proceed!



Access Code: 1407861056640

[Continue](#)

[Nevada Emissions Control Program](#) [Other states program status - OBD Clearinghouse](#)  
[National OBD Clearinghouse](#) [EPA AAMVA ASA](#) [List of Emission Stations](#)

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Access code should appear in the Access Code area  
Click Continue

Emissions

[Home](#)
[Logoff](#)

Diesel

New Inspection

Today's Tests

Inspector Home Page

VIR Diesel

Review and Reprint

ET Bulletins

Unread Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

Bus Name: JIFFY LUBE 2942, RENO

License#: EPES00029234 55 E PATRIOT BLVD RENO NV 89511224

DMV Bulletins:

View	Status	Bulletin No.	Subject	Sent Date	Priority
		2014529-1	UAT	05/23/2014	Yes
		2014529-2	UAT	05/29/2014	Yes
		2014616-1	UAT	06/16/2014	Yes
		2014628-1	sat test	06/26/2014	Yes
		201473-1	UAT	07/03/2014	Yes

Station Messages:

Date	Message
8/12/2014	Station license expires in 231 days.
8/12/2014	There are 20 Diesel VIR Remaining

Inspector Messages:

Date	Message
8/12/2014	Your license expires in 568 days.

Diesel Analyzer Status:

84

Click on New Inspection under "Diesel" in the left hand column

Emissions

Home Logoff

**Diesel**

New Inspection

Today's Tests

**VIR Diesel**

Review and Reprint

ET Bulletins

Unread

Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

New Diesel Inspection - Step 1 of 4

Bus Name: JIFFY LUBE 2942, RENO  
License#: EPES00029234 55 E PATRIOT BLVD RENO NV 895111224

Please enter Vehicle information to start the test!

VIN:

Re-Enter VIN:

Analyzer Number: WE108

Plate #:

State: NEVADA

No Plate Reason:

County:

Zip Code:

Odometer:

Is the GVWR > 14,000 lbs? ☐ Yes ☐ No

Full Time AWD: ☐ Yes ☐ No

Continue

3/22/2014 9:38 AM
8/12/2014 9:38 AM

85

Vehicle Information page to start the test!

- Inspector needs to fill in blank fields with vehicle information

Emissions

[Home](#) [Logout](#)

Diesel

New Inspection

Today's Tests

VIR Diesel

Review and Reprint

ET Bulletins

Unread Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

New Diesel Inspection - Step 1 of 4

Bus Name: JIFY LUBE 2042, RENO  
License#: EPES00029234 55 E PATRJOT BLVD RENO NV 89511224

Please enter Vehicle information to start the test!

VIN: nk067q054012994

Re-Enter VIN: nk067q054012994

Analyzer Number: WE108

Plate #: 123abc

State: NEVADA

No Plate Reason:

County: WASHOE

Zip Code: 89434

Odometer: 12345

Is the GVWR > 14,000 lbs? ☐ Yes ☒ No

Full Time AWD: ☐ Yes ☒ No

Continue

3/26/2019 8/12/2014 10:41 AM

Vehicle Information page to start the test!

- Vehicle information entered
- Click Continue

Emissions

---

Home Logoff

---

**Diesel**

New Inspection

Today's Tests

**VIR Diesel**

Review and Reprint

**ET Bulletins**

Unread Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

New Diesel Inspection - Step 2 of 4

---

Bus Name: JIFFY LUBE 2942, RENO  
License#: EPES00029234 55 E PATRIOT BLVD RENO NV 89511224

---

**No Error**

Please verify this is the correct vehicle. Return to previous screen if it is incorrect.

VIN: NK067Q054012994

Make: AM GENERAL CORP

Model: M35A2C

Year: 1978

Fuel Type: DIESEL

CYLS: 06

Back
Continue

**Messages**

Station has fewer than 25 Diesel VIR Remaining

Verify County of Residence - TEST may not be required

Vehicle Has A Current Passing Test on File

You have unread priority bulletins

---

1/20/2017 9
8/12/2014 10:49 AM

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[Nevada Emissions Control Program](#)
[Other states program status - OBD Clearinghouse](#)  
[National OBD Clearinghouse](#)
[EPA AAMVA ASA](#)
[List of Emission Stations](#)

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Vehicle Information that was entered comes back from Vehicle Inspection Database (VID)

- Verify this information is the correct vehicle
- Return to previous screen if it is incorrect
- Click Continue

Emissions

Home Logoff

**Diesel**

New Inspection

Today's Tests

VIR Diesel

Review and Reprint

ET Bulletins

Unread Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

New Diesel Inspection - Step 3 of 4

**Bus Name:** JIFFY LUBE 2942, RENO

**License#:** EPES00029234 55 E PATRIOT BLVD RENO NV 895111224

**VIN:** NK067Q054012994

**Visual Tampering Inspection:**

Catalyst(s): ☐ Pass ☐ Fail ☐ N/A

Particulate Filter/Trap: ☐ Pass ☐ Fail ☐ N/A

EGR System: ☐ Pass ☐ Fail ☐ N/A

Crankcase Vent System: ☐ Pass ☐ Fail ☐ N/A

Fuel Cap(s): ☐ Pass ☐ Fail

**Dynamometer Testing**

Mfgs Advertised HP:

Dyno Speed:

Dyno Horsepower:

Opacity Percent Reading:

Inspection Fee:

**Messages**

Station has fewer than 25 Diesel VIR Remaining

Verify County of Residence - TEST may not be required

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### Visual Tampering Inspection and Dynamometer Testing page

- Inspector needs to enter Visual Tampering Inspection results
- Inspector needs to enter Dynamometer Testing results
- Inspector needs to enter Inspection Fee

Emissions

[Home](#)
[Logout](#)

---

**Diesel**

New Inspection

Today's Tests

**VIR Diesel**

Review and Reprint

ET Bulletins

Unread Bulletins

2014 Bulletins

2013 Bulletins

2012 Bulletins

New Diesel Inspection - Step 3 of 4

---

Bus Name: JIFFY LUBE 2942, RENO  
License#: EPES00029234 55 E PATRIOT BLVD RENO NV 89511224

---

VIN: NK067Q054012994

**Visual Tampering Inspection:**

Catalyst(s): ☒ Pass ☐ Fail ☐ N/A

Particulate Filter/Trap: ☐ Pass ☐ Fail ☒ N/A

EGR System: ☒ Pass ☐ Fail ☐ N/A

Crankcase Vent System: ☒ Pass ☐ Fail ☐ N/A

Fuel Cap(s): ☒ Pass ☐ Fail

**Dynamometer Testing**

Mfgs Advertised HP:

Dyno Speed:

Dyno Horsepower:

Opacity Percent Reading:

Inspection Fee:

Messages

Station has fewer than 25 Diesel VIR Remaining

Verify County of Residence - TEST may not be required




Vehicle Max A Current Division Test on File

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## Visual Tampering Inspection and Dynamometer Testing

- Inspector entered Tampering and Dynamometer results
- Inspector entered Inspection fee
- Click Finalize Test





Emissions

[Home](#) [Logoff](#)

Diesel  
New Inspection  
Today's Tests

VIR Diesel  
Review and  
Reprint

ET Bulletins  
Unread  
Bulletins  
2014 Bulletins  
2013 Bulletins  
2012 Bulletins

New Diesel Inspection - Step 4 of 4

Bus Name: JIFFY LUBE 2942, RENO  
License#: EPES00029234 55 E PATRIOT BLVD RENO NV 895111224

No Error

Emission Test Result: PASS  
VIN: NK067Q054012994  
VIR: D206681

[Click Here to Print VIR](#)

Messages

Station has fewer than 25 Diesel VIR Remaining  
You have unread priority bulletins


3.420379

8/12/2014 10:56 AM


[Nevada Emissions Control Program](#) [Other states program status - OBD Clearinghouse](#)  
[National OBD Clearinghouse](#) [EPA AAMVA ASA](#) [List of Emission Stations](#)

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Test Finalized  
Click to Print VIR



**State of Nevada**  
Department of Motor Vehicles  
Vehicle Inspection Report



OVERALL TEST RESULT: PASSED




1F1BW3D11M620380

VEHICLE INFORMATION		
Year: 2021	Cylinders: 6	County: WASHOE
Make: FORD	GVWR: 14,000 lbs NO	ZID: 89521
Model: F350 S	Fuel: GASOL	Odometer: 15134
License Plate Number:	Fulland AWD: No	Inspection Type: RETEST
VIN: 1F1BW3D11M620380		

STATION INFORMATION
Station Number: WEA000
Analyst Number: JVA125
Inspector Number: E0000055311

TEST INFORMATION
Test Date: 07/19/2025 10:02:30
DMV ID: 818234
VIN Number: 018225
Station Test Fee: \$0.00
VIN Fee: \$0.00
Total Fee: \$0.00



Test results have been forwarded electronically to the Department of Motor Vehicles. Thank you for helping keep our air clean by having your vehicle emission tested. This Emission Test is valid for registration purposes for 90 days upon date of issuance.

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VIR is now in the Vehicle Information Database (VID)

- The customer can now register their vehicle
- Don't forget Nevada law requires the opacity printout to be attached to the VIR

# Waivers

NAC 445B.590

How can a failed test help anyone?

- Granted only by The Department
- There is no guarantee that the waiver will be granted



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## **A failed test can help a customer in three ways.**

1. 10-day movement permit (if registration is almost expired).
2. It starts the waiver procedure, should it be needed.
3. It makes a challenge test available to the customer at the lab, in the case that the customer thinks the test wasn't performed properly, or results were inaccurate.

A waiver permits registration of a vehicle that still doesn't pass the emission test after repairs. Only the Department may grant a waiver under the provisions of NAC 445B.590, Waiver of standards for emissions.

The Department will deny an application for a waiver if the parts have not been installed or the repairs were not directly toward the area of failure.

Minimum requirements for a waiver:

A minimum of \$750 in repairs, parts and labor, to diagnose and correct the problem, when performed at a repair facility, or \$500 in receipts for installed parts if repairs are performed by the owner.

A vehicle under a warranty covering the affected components is not eligible for a waiver.

Repairs made to required emission devices and repairs done to systems not directly related to the emission failure will not count toward the minimum expenditures

Waiver applications must be submitted by the customer at the local Emission Control Lab, and must include;

1. The failing vehicle
2. The initial failing emission test
3. Receipts documenting the repairs that did not fix the vehicle
4. The second failing emission test.

The issuance of a waiver is not guaranteed and there are no waivers for tamper failures.

## Important DMV emissions contacts Las Vegas

Emission Control Lab

- 702-486-4981

Smoking vehicle hotline

- 702-642-7664 (SMOG)

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Emission Control Lab

702-486-4981

Smoking vehicle hotline

702-642-7664 (SMOG)

## Important DMV emissions contacts Reno

### Emission Control Lab

- 775-684-3580

### Smoking vehicle hotline

- 775-686-7664 (SMOG)

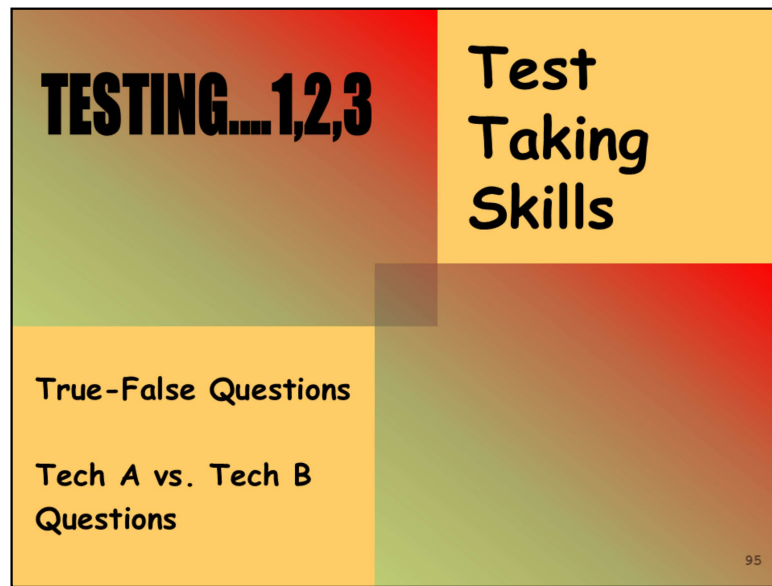
94

Emission Lab

775-684-3580

Smoking vehicle hotline

775-686-7664 (SMOG)



True – False questions

50 – 50 chance if you just guess!

Usually one is opposite of the other.

Probably hinges on one word or phrase.

You just need to prove it wrong, that is easier than proving it right!

Tech A vs. Tech B questions

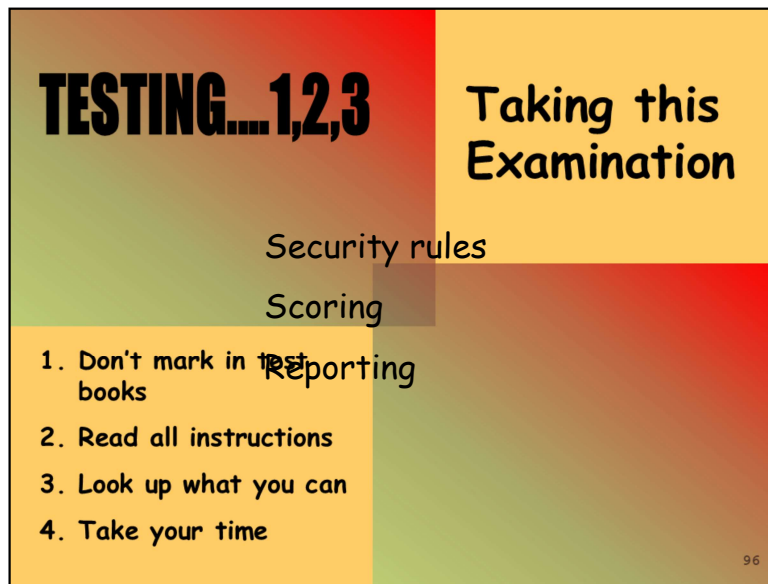
These look dangerous and complicated, after all there are usually two long statements you have to read through, but really these are almost as simple as True False. OK they are as easy as TWO True false question. That is what they are!

Read Tech A first and realize he is either right or wrong so his statement is either True or False!

Do not read the other techs statement until you decide on Tech A. Then do the same with Tech B's statement, it is either True or false!

The answers will be:

- (a) Tech A only
- (b) Tech B only
- (c) Both Tech A and Tech B.
- (d) Neither tech A nor Tech B



1. There is to be no marking in the test booklets. Each will be checked and any marks found will result in invalidating that applicants examination and they will be required to reschedule and retake the class and test. If your test booklet is marked in, immediately bring it to the instructors attention, so that you will not be penalized.
2. Read all instructions in the test booklet, all provided information is available for reference, this is an open book test.
3. Be sure to look up any item that is possible to look up, NAC, NRS, exhibits, your workbook, Etc.
4. Take your time, don't assume your recollection of the material is correct, some questions are meant only to test your' ability to look things up and determine what means are best to do this. The answers may be identical, except for one or two words.

The instructor may not assist you in answering a question, however they may assist you in understanding a question.

Security rules:

- 1) Cell phones are to be placed in silent or meeting mode and stay in your pocket or phone case. You may not place or accept phone calls during testing. You may not send or receive text messages during the test session. If a call comes in that you feel you must accept, turn in your paperwork and reschedule the class and exam.
- 2) No looking at another's answers, they are probably worse than yours anyway. If you are observed either looking at another's answers or showing another your answers you will be failed and must reschedule.
- 3) No talking during the test, if caught you will be failed and must reschedule.