

THE NEVADA CLEAN AIR BULLETIN

Department of Motor Vehicles

MANAGEMENT SERVICES
AND
PROGRAMS DIVISION



555 WRIGHT WAY

CARSON CITY NV 89711

A NEVADA I/M PROGRAM INFORMATIONAL NEWSLETTER SECOND QUARTER 2002

NATIONAL CAR CARE MONTH



It's Important Down the Road.™

National Car Care Month Is Coming Soon!

National Car Care Month is a nationwide effort by businesses, civic groups, the government and the media to focus motorists attention on the need to maintain and repair their cars. It is generally celebrated in October because it is an ideal time for motorists to get their cars ready before winter strikes. However, events are held throughout the year since good maintenance and repair should be practiced regularly.

National Car Care Month began as a state-wide program--in Ohio--promoted by that state's Department of Energy. In 1981, the Car Care Council was asked to coordinate the campaign and the program was taken nationwide. Its purpose is to improve highway safety, air quality, and fuel conservation.

Throughout the country, government, businesses and civic groups sponsor free safety and emissions checks. Motorists

receive information about vehicle maintenance and repair.

The 2001 check-lanes found that 72% of all vehicles needed repair or maintenance. Included in the failures:

- * 24% had low or dirty engine oil
- * 12% had low tire pressure
- * 15% had inadequate cooling protection
- * 11% needed new belts
- * 10% had dirty air filters

Many of the vehicles going through the check lanes had low or contaminated fluids in one or more system. Neglect of this kind can lead to early failure of an engine, transmission, or worse, the braking system.

Many automobile owners do not realize that maintenance is less costly than a major repair. Small problems get bigger when they are neglected. As a result, the motorist faces towing charges, huge repair bills and poor performance from their vehicles.

Motor vehicle accidents are the number one killer of people aged 1-44. Over 2,600 deaths occur each year because of car neglect, and nearly 100,000 disabling injuries happen every year. This means that eleven people are injured every hour and one person

dies every three hours due to accidents, which could have been prevented.

In terms of money, the cost is over 2 billion dollars each year due to car neglect. Over 650 million dollars are lost each year in wages. Medical expenses because of these accidents run another 200 million dollars. Insurance administration costs are almost \$500 million a year. The cost of motor vehicle property damage amounts to nearly 750 million dollars every year.

Of all motor vehicle accidents, 5.2% are caused by car neglect. This waste of life is preventable with proper maintenance. If a disease existed which took that many lives and crippled that many people, there would be researchers trying to find a cure for car neglect. If motorists took care of their cars, this disease would be stopped.

Car Care Council has an Event Planner available for anyone interested in putting together a car care event or vehicle inspection lanes. The Planner includes everything you need to know to set up a car care event as well as ad slicks, sample press releases and radio.

For more information about National Car Care Month:
<http://www.carcarecouncil.org>
(Article taken from car care council web page)

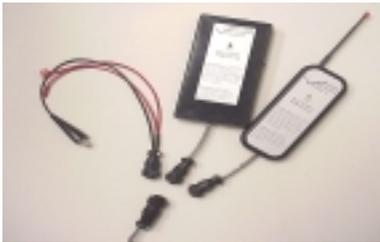
TACH SIGNAL GUIDANCE

By: Thomas Lansford
DMV Emission Technician

When trying to locate a tach signal on a vehicle, try to think of all the options available. Too many Techs go straight to the non-contact RPM pickup if plug wires are not available.

Please consider two things:

- Make sure you verify both the high and low RPM tach signals before proceeding to the test stage. Many vehicles will display a good tach signal at low RPM but may display a unstable or false signal at high RPM. Remember, if you proceed to the test stage and the customer should experience a false failure due to a bad tachometer signal you will be required to retest the vehicle at no charge to the customer.
- It is to your advantage to try hard to get a tach signal before inconveniencing a customer and sending them away. The average time to locate a tach signal at the Reno Emissions Lab is less then 5 minutes.



Tach Signal Quick Reference

When a vehicle comes in for an emission test check for:

- An OBDII data link connector - 1996 & newer light duty or 1998 & newer heavy duty.
- An automotive manufacturer provided tach loop (located on the engine compartment wiring harness).
- Accessible coil pack wires - The green wire loop that Worldwide provided can be used.
- Accessible fuel injector wires - The green wire loop that Worldwide provided can be used.

- Wiring that is directed towards the fuel injector or coil pack area.
- An igniter module - Normally has a tach signal pulse wire
- Manufacturer specific OBDI plugs that may carry a tach signal.
- A safe location to place the non-contact probe near a spark plug, coil wire, fuel injector, wiring harness, or fuse box.
- Don't be afraid to try a few things to get a signal. An example: Try switching from DIS To Four Cycle Or possibly Coil Over Plug to bring the signal into range.



Please share your information. If you find a great way to get a tach signal on a vehicle write it down and give it to your emission lab tech at his next visit. We will share it with all the techs.

Don't be afraid to experiment.

In closing remember to always work safely. Don't put your hands or arms in harms way and don't place your probes or cords in an area of extreme heat or where moving parts may damage or destroy them.

The Details and "How to"

Best options are:

- The OBD II connector - 1st choice.
- Red Contact pickup - 2nd choice.
 - Does the automotive manufacturer provide a tach loop? You can connect the red contact lead to a tach loop.
 - Try the red contact lead on the wires going to an individual coil.
 - Try the red contact lead on a fuel injector harness.

- Try the red contact lead on various harnesses in the engine compartment that may carry a tach pulse, fuel injector pulse or a coil pulse.
- Opening the non-contact red lead and laying it in various areas of the engine compartment can obtain some signals (Volvo inline 6 on rear of valve cover).
- For hard to get wiring Worldwide provides a green wire loop that can be wrapped around various harnesses, coil and/or injector wires and clipped with the red contact lead to obtain a tach signal.
- Look for igniter packs on some vehicles. These igniter packs often have signal wires that can be utilized to get a tach signal using the red contact lead. Sometimes this also requires the use of the green Worldwide wire loop. (Infinity & Nissan)
- While trying to get a tach signal keep in mind you may need to change a DIS or coil over plug vehicle to four cycle or a four cycle to DIS to bring the RPM's into the correct range. Don't be afraid to experiment.

Non-Contact (last Choice)

- Antenna type - Must be set on four-cycle.
 - Try placing the antenna as close to a signal source as possible. This could be a spark plug, coil, fuel injector and wiring harness or fuse box. Slight movement could make a big difference in the signal pickup.
 - Make sure the area you put it in is free of moving objects and that the non-contact probe will not vibrate out of position or fall into an unsafe area of the engine compartment.
 - Be aware that by rotating the probe box or flipping it upside down you may get

a signal. Try rotating 90 degrees at a time.

- o Some non traditional areas to get a tach signal with the new optional pickup are:
 - Windshield just above the instrument cluster (Nissan Maxima).
 - On top of the fuse box. (BMW 735 left front with the probe sensitivity switch set to the center position and probe wiring pointing to the front of the car).
 - On top of the valve cover (GM Quad Four Vehicles)

NEVADA SMOKING VEHICLE REPORTING PROGRAM

In 1996 the Department of Motor Vehicles & Public Safety implemented a program that allows citizens to report smoking vehicles. The DMV Compliance Enforcement Division, Emission Control Section staffs this program.

The Nevada Revised Statute and Nevada Administrative Code authorizes the DMV to follow through with regulatory action for smoking vehicles on all highways regardless of county. However, the primary goal of the Smoking Vehicle Reporting Program is to provide education and information to owners of vehicles that emit exhaust smoke in an effort to obtain **voluntary compliance**. Under no circumstances will the division take adverse action against a vehicle owner, nor compel action by a vehicle owner on the basis of anonymous information.

The emission control section maintains a computer database for smoking vehicles. When the staff receives the first report from the public SMOG hotline on a vehicle that is **allegedly** emitting visible smoke the information is entered into the computer database. A smoking vehicle public awareness letter is then mailed to the registered owner's address of record. If the emission control staff

receives a second report on the vehicle, a multiple observation report courtesy letter is generated and mailed to the registered owner. The license plate number for vehicles that have multiple reports in the computer database is then provided to all emission control technicians that are tasked with field assignments. If a vehicle is subsequently observed and reported by a department employee, emission technician or law enforcement officer regulatory action as noted further into this overview can be implemented.

When a department employee, emission technician or law enforcement officer observe a vehicle that is emitting visible smoke a case is initiated. The employee makes out a written report or the identifying law enforcement badge number is provided to the emission control staff.

The history of the reported vehicle is researched and a **confirmed** observation letter is mailed to the registered owner's address of record notifying them of case initiation and requesting them to contact the emission control staff within 10 days. When all avenues to gain voluntary compliance have been exhausted, regulatory action is initiated.

First, a Notice of Violation and Intended Action letter is sent by certified mail to the registered owner. This letter advises the registered owner that a DMV representative has observed their vehicle emitting exhaust smoke and that they have 30 days to comply with the Nevada Revised Statute of Nevada Administrative Code.

Proof of correction can be obtained by:

1. Having the vehicle inspected by a law enforcement officer or a DMV Emission Technician.
2. Submit an emission certificate dated after the noted observation, indicating pass for visible smoke.

If the department within the 30-day time period does not receive evidence of correction, a Notice of

Registration Cancellation letter is sent by certified mail. The registered owner has 30 calendar days to request an administrative hearing that is held by a State of Nevada Law Judge. If a hearing request is not received, the notice will be considered the final order of the department.

REPORTING SMOKING VEHICLES

Smog, a powerful lung irritant that has a cumulative effect on the body, is able to burn through lung tissue and cell walls, causing the lungs to become inflamed and swollen. Scarring of the lungs can occur over time, causing individuals to become more susceptible to bacteria and other disease-causing organisms. It also has a major impact on our Air Quality.

Do your part to help improve Air Quality. Report smoking vehicles by calling **642-SMOG** in Las Vegas OR **686-SMOG** in Reno. Callers should be prepared to provide the license plate number of the smoking vehicle, the approximate time the vehicle was spotted and the location of the vehicle. All information is confidential.

The number of phone calls received through the public SMOG hotline numbers has been significant. For the last quarter of Fiscal year 2002 alone, phone calls received and logged were 2,236 and 2,070 for Washoe and Clark County respectively.

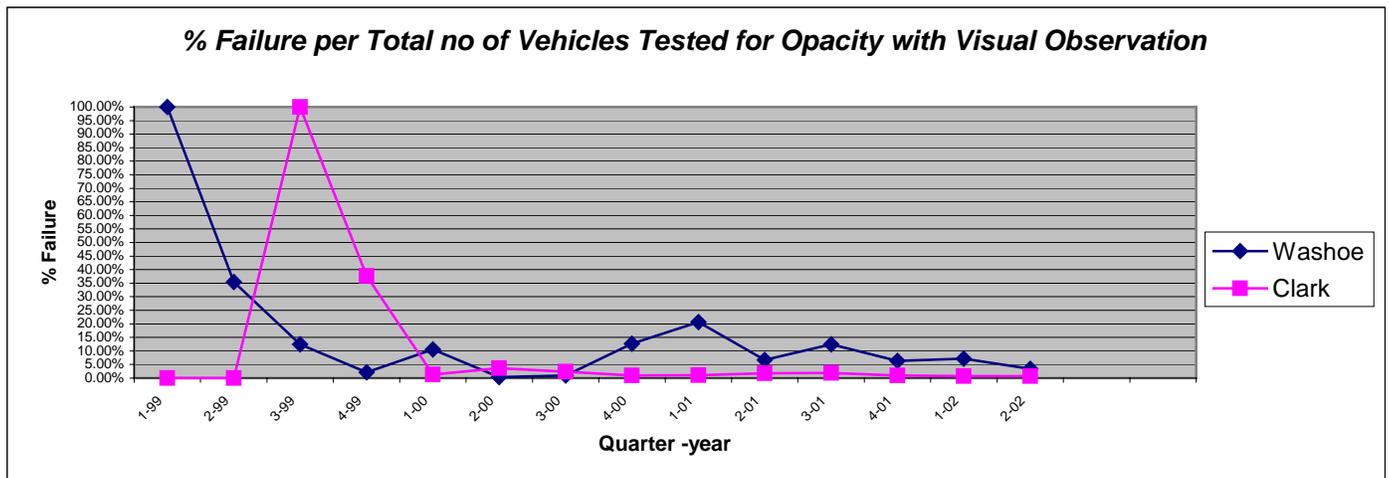


Total Number of Heavy Duty Diesel Vehicles Tested for Opacity Washoe County

Quarter	Total No. of Vehicles Tested for Opacity	Total No. of vehicles that passed	Total No. of Vehicles that Failed	Total Visual Observation	% Failure per Total no of vehicles tested for Opacity and Visual Observation
1-99	1	0	1	0	100.00%
2-99	48	31	17	0	35.42%
3-99	136	119	17	0	12.50%
4-99	193	158	35	1,463	2.11%
1-00	208	186	22	0	10.58%
2-00	157	146	11	3,188	0.33%
3-00	66	60	6	593	0.91%
4-00	63	55	8	0	12.70%
1-01	29	23	6	0	20.69%
2-01	60	56	4	0	6.67%
3-01	113	99	14	0	12.39%
4-01	47	44	3	0	6.38%
1-02	244	217	27	136	7.11%
2-02	147	142	5	0	3.40%

Total Number of Heavy Duty Diesel Vehicles Tested for Opacity Clark County

Quarter	Total No. of Vehicles Tested for Opacity	Total No. of vehicles that passed	Total No. of Vehicles that Failed	Total Visual Observation	% Failure per Total no of vehicles tested for Opacity and Visual Observation
1-99	0	0	0	0	0.00%
2-99	0	0	0	0	0.00%
3-99	1	0	1	0	100.00%
4-99	93	58	35	0	37.63%
1-00	184	146	38	2,747	1.30%
2-00	302	208	94	2,267	3.66%
3-00	345	230	115	4,477	2.38%
4-00	166	127	39	4,024	0.93%
1-01	158	116	42	3,885	1.04%
2-01	205	117	88	4,644	1.81%
3-01	151	104	47	2,416	1.83%
4-01	88	71	17	1,713	0.94%
1-02	136	104	32	4,768	0.65%
2-02	126	88	38	5,286	0.70%



HEAVY DUTY DIESEL PROGRAM

The Department of Motor Vehicles has been involved with testing on-road heavy-duty diesel vehicles for nearly eight years. Nevada's opacity testing program is one of the oldest operating within the United States. The program started as a pilot in order to gather sufficient data so that opacity standards could be set. DMV staff tested several thousand vehicles during the pilot period, in order to gather the required data needed to set reasonable standards.

Initially, heavy-duty vehicles were inspected in conjunction with Nevada Highway Patrol Commercial Enforcement Safety Inspections. These inspections occur at weigh stations located on the interstate highways. Fleet operators can also request that DMV emission control technicians test their vehicles at fleet yards.

The inspection consists of an exhaust smoke opacity inspection and if required a visual inspection of the under-hood engine emission control systems. An administrative citation is issued for vehicles that fail the inspection. However, for first time failing vehicles, the \$800.00 fine is waived if the vehicle is repaired and evidence of the repairs are submitted to DMV within 45 days. Most operators of heavy duty vehicles make the needed adjustments or repairs to their failing vehicles, because their vehicles ultimately operate more efficiently.

In the Clark County area this program has been stepped up by the addition of two teams that patrol the streets in marked utility vehicles. The two teams, that each consist of one investigator and one emission technician patrol the streets and perform traffic stops on heavy-duty vehicles that visually appear to be exceeding state opacity standards. Opacity inspections are performed on the vehicles in question and if the inspection results in a failure, an administrative citation is issued. The program has been a huge success in the Clark County area, with positive support from the industry. Because of the success of this enforcement program in Clark County, the Department has set a goal of also implementing the program in Washoe County sometime in the future.

Programs such as this heavy-duty opacity inspection program are essential, in order to improve our air quality in Nevada.

NO OBDII CONNECTIONS

A few emission stations have experienced "no-connects" when attempting to inspect OBDII systems. The DMV has learned that some of these vehicle on-board computers required re-programming in order to connect with the OBDII scanner. Should you experience a "no-connect" please inform your customer of your findings and ask them to drop by the nearest emission test lab for a verification inspection. It is very important that we determine if any "no connects" are due to issues within the vehicle or our inspection equipment while we are on the advisory period. When OBDII inspections become pass/fail it will be a much more complicated process for motorists who have vehicles with "no-connect" problems.

The DMV would like to thank both the vehicle dealer service department management and technicians for sharing their service information results for vehicles that would not connect with the OBDII scanners. Their efforts will make the transition to OBDII inspections a much easier process for Nevada Motorists.

If you have any questions about the OBDII inspection process please contact your nearest DMV emission test lab.

Las Vegas
2701 East Sahara Avenue
702-486-4981

Reno
305 Galletti Way
775-684-3581

Top 10 Diagnostic Trouble Codes

Count	DTC	Description
663	P0325	Knock Sensor 1 Circuit Malfunction (Bank 1 or Single Sensor)
403	P0171	System Too Lean (Bank 1)
393	P0300	Random/Multiple Cylinder Misfire Detected
323	P0420	Catalyst System Efficiency Below Threshold (Bank 1)
287	P0401	Exhaust Gas Recirculation Flow Insufficient Detected
283	P0174	System Too Lean (Bank 2)
277	P0455	Evaporative Emission Control System Leak Detected (gross leak)
248	P0133	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
234	P0301	Cylinder 1 Misfire Detected
224	P0134	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)

STATE OF NEVADA Department of Motor Vehicles OBD Failure Rate Analysis Report Period: 2002

Location: All

Make: All

Test type: All

Weight Class: All

Model	Total	Rejects #	Rejects %	DTC #	DTC %	MIL On	MIL ON %	All OBD Failures	
								#	%
2002	124	9	7.3	4	3.2	2	1.6	2	1.6%
2001	3,563	127	3.6	145	4.1	51	1.4	51	1.4%
2000	26,522	407	1.5	1,101	4.2	276	1	276	1.0%
1999	26,254	571	2.2	1,208	4.6	475	1.8	475	1.8%
1998	22,488	544	2.4	1,454	6.5	656	2.9	656	2.9%
1997	21,753	751	3.5	2,470	11.4	1,329	6.1	1,329	6.1%
1996	17,981	1,043	5.8	2,895	16.1	1,657	9.2	1,657	9.2%
	118,685	3,452	3.8	9,277	7.2	4,446	3.4	4446.0	3.7%