PROPOSED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION

P2009-03
September 11, 2009

EXPLANATION – Matter in ***italics*** is new; matter in brackets **[**omitted material**]** is material to be omitted.

AUTHORITY: NRS 445B.210, NRS 445B.760, NRS 445B.770, NRS 445B.780, NRS 445B.785.

A REGULATION relating to standards for automotive emissions and providing other matters properly relating thereto.

Section 1. NAC 445B.587 is hereby amended to read as follows:

445B.587 1. Equipment for the measurement of smoke opacity from light-duty motor vehicles powered by diesel engines ***and heavy-duty motor vehicles that are powered by diesel engines and have a manufacturer's gross vehicle weight rating which does not exceed 14,000 pounds*** must include a dynamometer and a smoke opacity meter.

2. The dynamometer must have:

(a) The capacity to absorb a minimum of 100 horsepower.

(b) A mechanism for controlling the load that is capable of:

(1) Infinitely variable settings throughout the load and speed range from no-load to full-load;

(2) Being set at a load or speed and, until deactivated, maintaining a preset setting without additional input from the load controller; and

(3) Being operated in the following function modes:

(I) Constant speed;

(II) Constant torque;

(III) Constant horsepower; and

(IV) Manual absorber.

(c) Computer controls which include, without limitation:

(1) A model 286 12-megahertz central processing unit;

(2) A 256 kilobyte video graphic array color card;

(3) A 1.44 megabyte floppy drive;

(4) Five hundred and twelve kilobytes of random access memory;

(5) Parallel printer interface; and

(6) Digital and analog data acquisition interface.

(d) A minimum roller diameter of 8.5 inches.

(e) One hundred and fifteen volt AC single phase 60 Hz power.

(f) A weight limit of 6,000 pounds per axle.

(g) A provision for checking the accuracy of the calibration of the dynamometer in the field, including, without limitation, an electrical output signal, interface and attendant instrumentation. Equipment, tools and procedures recommended or specified by the manufacturer for the calibration and adjustment of the dynamometer must be available.

3. The smoke opacity meter must have:

(a) Calibration accuracy within 1 percent.

(b) Linearity within 1 percent, from 0 to 60 percent opacity.

(c) Drift within 1 percent of the temperature range specified by the manufacturer.

(d) A response time of less than 2 seconds from 0 to 90 percent of scale.

(e) A warm-up time of not more than 10 minutes.

(f) An operating temperature range from 32 to 120 degrees Fahrenheit.

(g) One hundred and fifteen volts AC input, if operated from alternating current.

(h) Batteries which are replaceable or rechargeable, and which allow for the operation of the smoke opacity meter without AC input.

(i) A RS232C standardized serial interface.

(j) The ability to measure exhaust opacity continuously.

Sec. 2. NAC 445B.588 is hereby amended to read as follows:

445B.588 A list of equipment approved for testing light-duty motor vehicles powered by diesel engines ***and heavy-duty motor vehicles that are powered by diesel engines and have a manufacturer's gross vehicle weight rating which does not exceed 14,000 pounds*** and specifications for that equipment will be on file with the Department. A copy of the list may be obtained by writing to:

Department of Motor Vehicles

Division of Management Services and Programs

555 Wright Way

Carson City, Nevada 89711

Sec. 3. NAC 445B.589 is hereby amended to read as follows:

445B.589 1. An inspector shall comply with the following procedure when testing a light-duty motor vehicle powered by a diesel engine ***or a heavy-duty motor vehicle that is powered by a diesel engine and has a manufacturer's gross vehicle weight rating which does not exceed 14,000 pounds***:

(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.

(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.

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

Number of Cylinders	Speed (± 4 miles per hour)	Load (± 1 horsepower)
4	40	7.0
6	40	15.0
8	40	30.0

(3) Maintain the required speed and load condition on the vehicle being tested for 10 seconds. The engine opacity must be stored and printed at the end of the 10-second interval.

2. The inspector shall issue a certificate of compliance indicating the results of the test. The printout from the opacity meter must be provided with the certificate of compliance. The test is complete if the vehicle passes the tampering inspection phase and the results of the opacity test phase comply with the standards set forth in NAC 445B.576. A vehicle which exceeds the opacity standards or which fails the tampering inspection phase must be considered to have failed the inspection and the inspector shall issue a certificate of compliance reflecting the failure.

3. A vehicle which fails the tampering inspection phase or the opacity test must be repaired and retested.

4. If a motor vehicle subject to the provisions of this section passes all portions of an inspection but has an improper fuel cap or no fuel cap, the owner or operator of the motor vehicle shall obtain a fuel cap which is in accordance with the specifications of the manufacturer of the vehicle. The inspector shall inspect the new fuel cap and certify its presence in a manner prescribed by the Department, and sign and date the failing vehicle inspection report beneath the fuel cap tamper description. Such a vehicle inspection report may be used as evidence of compliance.

Sec. 4. NAC 445B.592 is hereby amended to read as follows:

445B.592 The provisions of subsection 3 of NAC 445B.576 and NAC 445B.593 to 445B.596, inclusive, do not apply to any:

1. Motorcycle or moped.

2. Motor vehicle which is subject to prorated registration pursuant to NRS 706.801 to 706.861, inclusive, and is not based in this State.

3. New motor vehicle until the third registration of the vehicle.

4. Motor vehicle permanently converted from gasoline to propane, compressed natural gas (CNG), methane or butane as a fuel.

5. Motor vehicle with a model year before 1968.

6. Heavy-duty motor vehicle which has a manufacturer's gross vehicle weight rating of more than [~~10,000~~] ***14,000*** pounds and which is powered by a diesel engine.

7. A trimobile that meets the definition of a motorcycle in 40 C.F.R. § 86.402-78 or 86.402-98, as applicable.

Sec. 5. NAC 445B.596 is hereby amended to read as follows:

445B.596 1. Each motor vehicle powered by gasoline with a model year of 1968 to 1995, inclusive, and, with regard to motor vehicles with a model year of 1996 or newer, each heavy-duty motor vehicle powered by gasoline, that is subject to an inspection pursuant to NAC 445B.593, 445B.594 or 445B.595 must not have:

(a) Smoke in its emissions from its exhaust or crankcase when the prescribed procedure for the testing is used.

(b) Carbon monoxide or hydrocarbon, or both, in its emissions from its exhaust in excess of the limits set forth in subsection 3 or 4.

2. The measurements required by subsection 1 must be made with an approved exhaust gas analyzer and under the prescribed procedure. The engine must be at normal operating temperature, but if it has been operating at an idle for more than 5 minutes, it must be purged before the measurement is taken.

3. The following standards apply to light-duty motor vehicles subject to subsection 1:

Model Year	Maximum CO%	Maximum HC(PPM)

1968-1969	4.0	800
1970-1974	3.5	700
1975-1978	2.5	500
1979-1980	2.0	500
1981-1995	1.2	220

4. The following standards apply to heavy-duty motor vehicles subject to subsection 1:

Model Year	Maximum CO%	Maximum HC(PPM)
1968-1969	7.0	1400
1970-1978	6.0	1400
1979	5.0	1000
1980	4.0	1000
1981 and newer	3.5	1000

5. Standards for exhaust emissions which apply to a:

(a) Reconstructed vehicle, as defined in NRS 482.100; and

(b)Trimobile, as defined in NRS 482.129, that does not meet the definition of a motorcycle in 40 C.F.R. § 86.402-78 or § 86.402-98,

➥ must be based on standards which were in effect in the year in which the engine of the vehicle was built.

Sec. 6. NAC 445B.749 is hereby amended to read as follows:

445B.749 "Heavy-duty motor vehicle" means a motor vehicle having a manufacturer's gross vehicle weight rating of ~~[8,500]~~ ***14,001*** pounds or more.