

Tips

Excessive smoke from diesel engines is a result of tampering, inadequate maintenance, poor fuel quality and, in certain instances, improper vehicle operation. Here are a few simple techniques that may prevent the problems that contribute to excessive smoke and save you money:

- ✓ Maintain your vehicle within manufacturers' specifications
- ✓ Practice good driving habits – accelerate and down shift appropriately
- ✓ Use proper replacement parts that meet or exceed manufacturers' specifications
- ✓ Use high quality fuel
- ✓ Never tamper with engine settings or remove or disable engine emissions controls
- ✓ Be aware of the appearance of the exhaust, and overall engine and vehicle condition and performance

For more information about this initiative and related state programs, please visit:

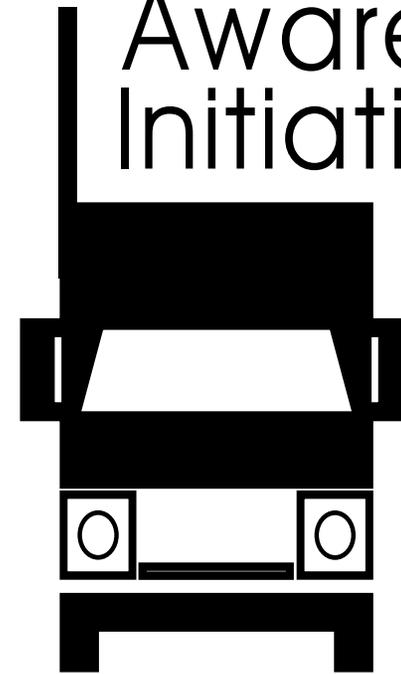
www.dieselsmokeawareness.org

The Smoke Awareness Initiative is a coalition of the following:

Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont, along with NESCAUM, Diesel Technology Forum, Maine Motor Transport Association, Maryland Motor Truck Association, New Hampshire Motor Transport Association, New Jersey Motor Truck Association, New York State Motor Truck Association, Rhode Island Trucking Association, and Vermont Truck and Bus Association.

Smoke

Awareness
Initiative



How to Reduce
Diesel Smoke Emissions,
Lower Maintenance Costs
& Improve Fuel Economy

The Smoke Awareness Initiative is a coalition of state environmental, transportation and motor vehicle agencies, trucking associations, engine manufacturers and their dealers working together in an effort to reduce diesel smoke emissions from heavy-duty vehicles in the northeast. Passenger cars and light-duty trucks are already subject to inspections that check emissions controls and help minimize their pollution. It is necessary to address heavy-duty diesel vehicle emissions in a similar manner. While new emissions standards and improved maintenance practices have reduced smoke from the majority of diesel trucks and buses, vehicles in a poor state of repair continue to emit high levels of smoke. The Coalition is working to educate the transportation community about state smoke opacity testing programs and to promote proper engine maintenance. The Coalition's work complements national efforts such as the American Trucking Associations' "On the Road to Clean Air Campaign" and state education and outreach efforts.

Q. What is the goal of the Smoke Awareness Initiative?

A. In a regional effort to reduce excess smoke from heavy-duty diesel vehicles, the states of Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont have established similar smoke opacity standards and testing methods. In partnership with trucking and transportation entities, the States have launched the Smoke Awareness Initiative to conduct a variety of outreach and education programs about the regional program.

Q. How does the regional Smoke Awareness Initiative complement individual state programs?

A. The purpose of the Smoke Awareness Initiative is to inform heavy-duty diesel vehicle users and owners throughout the northeast about excessive smoke emissions. Participating states currently have, or are implementing, inspection programs to reduce excessive smoke. This regional initiative will educate the transportation community about diesel smoke opacity regulations, common causes of excessive smoke, and preventive maintenance strategies by distributing materials to heavy-duty diesel vehicle users, such as fleet operators, drivers, and mechanics. Some states will conduct voluntary smoke tests or smoke test demonstrations as part of the initiative. Specific information regarding individual state programs is available from each state or at www.dieselsmokeawareness.org.

Q. What is opacity?

A. Opacity is a measurement of the amount of light that is obscured by smoke. A beam of light from a light meter is projected through a smoke sample and the meter measures how much of that light is able to reach a receptor. The percentage of light that does not reach the receptor is the opacity of the smoke. Therefore, when there is no visible smoke, the opacity will measure 0% meaning all of the light was able to pass through. Very dark smoke may reach 100% opacity meaning none of the light was able to pass through.

Q. How is the opacity of diesel engine smoke measured?

A. The opacity is measured by an opacimeter using the Snap Acceleration Test Procedure (SAE J1667), also known as a "snap test." A probe is placed into the exhaust pipe and all accessories that might put an extra drag on the engine are turned off (air conditioner, radio, etc.). All brakes or engine retarders are released or turned off. The wheels are chocked and the transmission is put in neutral. The driver is prompted to snap the engine – "put the pedal to the metal" – and hold it there for a few seconds. The opacimeter will analyze five or six snaps; the first few clean out the exhaust pipe while the second set of snaps are averaged into an opacity percent. The test is typically completed in less than 15 minutes.

Q. What are the opacity standards?

A. Heavy-duty highway vehicles must comply with the following opacity standards:

<u>Model Year</u>	<u>Smoke Opacity Cutpoint</u>
1991 and newer	40%
1990 thru 1974	55%
1973 and older	70%*

* Applies in CT, MD, NH, NJ & NY

Q. What are the benefits of complying with the opacity standards?

A. A smoking vehicle is a sign of a poorly maintained and inefficient engine. Excessive smoke indicates higher operating costs, lower fuel economy, higher maintenance costs and shorter engine life. The best prevention is a properly tuned and maintained engine. You should always be aware of your vehicle's exhaust and the overall condition and performance of your vehicle. Use the information on the back of this brochure to help avoid excessive smoke.