

YOU HOLD THE KEY—

WHAT YOU SHOULD KNOW ABOUT TRUCK AND BUS ENGINE IDLING

Diesel engines in trucks and buses play an important role in transporting goods, services, and people nationwide. However, there is growing concern about the health effects associated with exposure to diesel exhaust.



Diesel exhaust affects everyone, but people with heart or lung disease, asthma or other respiratory problems are most sensitive to the small particles in diesel exhaust. Fortunately, new emission standards and new technology are helping to ensure that the cleaner diesel engines of the future will dramatically lower these health risks.

If you drive a diesel vehicle, the first thing you can do now to save money and reduce air pollution is stop idling. Idling for extended periods of time generates significant amounts of diesel exhaust—and air pollution. It also wastes fuel, causes excessive engine wear, and poses health risks to everyone including drivers. In New Hampshire, a state regulation limits idling time.

THE NEW HAMPSHIRE ANTI-IDLING RULE

New Hampshire rules (Env-A 1101.05 and Env-A 11.01.06) prohibit idling of any diesel-powered motor vehicle for more than five minutes when the temperature is above 32°F, or 15 minutes when the temperature is below 32°F, with the following exceptions:

- When the temperature is below -10°F;
- When a diesel-powered motor vehicle is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;
- When a diesel-powered motor vehicle is being used as an emergency motor vehicle;
- When a diesel engine is providing power takeoff for refrigeration, lift gate pumps or other auxiliary uses, or supplying heat or air conditioning necessary for passenger comfort in those vehicles intended for commercial passenger transportation;
- When a diesel-powered motor vehicle is being operated by a mechanic for maintenance or diagnostic purposes; or
- When a diesel-powered motor vehicle is being operated solely to defrost a windshield.

WHAT ARE SOME OF THE PROBLEMS ASSOCIATED WITH IDLING?

IDLING CAUSES POLLUTION

- Idling vehicles emit significant amounts of pollution including: carbon dioxide (CO₂ contributes to global climate change); nitrogen oxides and volatile organic compounds (NO_x and VOCs contribute to the formation of ozone smog); poisonous carbon monoxide; and particulate matter (PM contributes to asthma, heart disease, lung damage, and possibly cancer).

IDLING WASTES FUEL AND MONEY AND CAUSES EXCESSIVE ENGINE WEAR

- A typical truck burns about a gallon of diesel fuel for each hour it idles. If a truck idles for 6 hours per day, operating

300 days a year, it would consume more than 1,800 gallons of fuel per year – just idling. At \$1.25 per gallon of diesel, this would add over \$2,250 to the truck's annual operating cost.

- Running an engine at low speed (idling) causes twice the wear on internal parts compared to driving at regular speeds. The American Trucking Association estimates that this can shorten the life of the engine and increase maintenance costs by \$2,000 per year.
- It is more fuel efficient to turn off your engine than to idle. Fuel consumption during engine start-up is equal to about 30 seconds of engine idling if the engine is within normal operating temperature.

IDLING POSES HEALTH RISKS TO EVERYONE INCLUDING DRIVERS

- While sitting in an idling vehicle, drivers are exposed to the vehicle's pollution more so than when the vehicle is in motion since there is no airflow to vent the emissions.

TIPS FOR OWNERS AND OPERATORS OF DIESEL VEHICLES

INITIAL STARTING/WARM-UP TIME

Most engine manufacturers recommend that newer engines run for roughly 3-5 minutes before driving. In colder climates, block heaters are a good alternative to excessive idling. They plug into electrical outlets and help warm the engine to avoid starting difficulties.

RESTARTING

Most newer diesel engines, when properly maintained, will not have starting difficulties and do not need to idle for long periods of time in order to restart. Older vehicles may have more difficulty restarting, but don't assume new engines should be operated like older ones. Check the manufacturer's recommendations.

WHAT CAN YOU DO?

Turn off your engine when your vehicle is not in motion and you will:

- Save money
- Use less fuel
- Reduce engine wear

Follow the New Hampshire anti-idling rule

Use proven technologies such as:

- Electric engine heaters to minimize warm-up time
- Auxiliary power units to provide electric power

SOME PROBLEMS ASSOCIATED WITH IDLING

- 1 Idling wastes fuel and money
- 2 Idling causes excessive engine wear
- 3 Idling causes air pollution
- 4 Pollution from idling poses health risks to drivers

FUEL GELLING

In recent years, refiners have worked to resolve the problem of diesel fuel gelling. They have created special winter blends that better withstand colder temperatures.

AUXILIARY POWER UNITS

Installing a small generator, or auxiliary power unit, that provides heat, air conditioning, and/or electrical power while the vehicle is not in motion can save up to 95 percent of the fuel used during idling, saving you money and creating less air pollution. Depending on the amount of time spent idling each year the payback on these devices can be one to two years. For more information about idle control technology, visit: www.epa.gov/otaq/retrofit/idlingtech.htm.

NEW VEHICLES

When buying new equipment, purchase engines already equipped with devices that minimize idling and warm-up time automatically.

EXTRA TIPS FOR OWNERS AND OPERATORS OF DIESEL BUSES

PASSENGER COMFORT

Depending on the weather, many buses will maintain a comfortable interior temperature for a while without idling. However, bus owners may want to consider installing auxiliary power units to maintain comfortable interior temperatures without idling.

WAITING FOR PASSENGERS

In most cases, the three minutes of idling allowed under state law is enough to ensure that passengers will be comfortable when they reach their seats. Because many newer buses are equipped with air conditioning and windows that do not open, buses that do not have auxiliary power units must run their engines at some point to supply ventilation and climate control. But out of habit, some drivers leave their vehicles running for the entire waiting period. It is better to shut the engine down between drop off and pick up times.

Letting an engine idle does more damage to the engine than starting and stopping.

Most engine manufacturers recommend that newer engines run for just 3-5 minutes before and after driving.

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Visit our website at www.epa.gov/ne/eco/diesel



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NEW HAMPSHIRE EDITION

REDUCE POLLUTION
AND SAVE MONEY

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EPA United States
Environmental Protection
Agency New England