

## Diesel Idle Reduction

Unnecessary idling of diesel vehicles pollutes the air, wastes fuel, and causes excess engine wear. Fortunately, it's easy to implement practices that reduce idling.

### Reduce Pollution

Idling vehicles pollute air in and around the vehicle. Exhaust from vehicles can also enter buildings through air intakes, doors and open windows. Diesel exhaust from excessive idling can be a health concern.

### Wasted Fuel and Money

Idling vehicles waste fuel and money. When idling, a typical diesel engine burns approximately half a gallon of fuel per hour. Eliminating unnecessary idling can save significant dollars in fuel costs each year.

### Engine Wear-and-Tear

Diesel engines do not need to idle more than a few minutes to warm up. Engine manufacturers generally recommend no more than three to five minutes of idling. Caterpillar, Inc. cautions drivers to "... Avoid excess idling. If the vehicle is parked for more than five minutes, stop the engine. Excessive idling can cause carbon buildup and/or excessive idling can cause the engine to slobber. This is harmful to the engine." IC Corporation's engine manual states, "...Excessive idling reduces fuel economy and may decrease oil life."

### Reduce idling time - the savings add up!

It's easy to estimate the cost savings realized by reducing idling, using the formula:

**Cost Savings = FS × IT × DU × DC × Days**, where

- **FS** is the size of your fleet
- **IT** is the reduction in idling time per day for each vehicle
- **DU** is the amount of diesel used for each hour of idling
- **DC** is the cost of diesel in dollars/gallon
- **Days** is the number of days per year each vehicle is used.

Using this formula, and assuming idling uses one-half gallon of diesel per hour, a company with a fleet of 100 vehicles operating 180 days per year, which reduces idling time by an average of 30 minutes per vehicle per day, at a diesel cost of \$2.70 per gallon will save \$12,150 per year in fuel costs.

*\*Based on formula estimates by U.S. EPA, Clean School Bus USA*



## Anti-Idling Strategies

- Reduce early morning idling time to limit exhaust buildup in vehicles.
- Designate an area inside for drivers to wait if they arrive early.
- Consider installing anti-idling technology, such as auxiliary heaters.
- Change vehicle circuit configuration to run lights and heating/cooling off the battery.
- Adopt an anti-idling policy and train drivers to follow it.
- Turn off engines as soon as possible after arriving at loading or unloading areas.

## Idling Myths

**Myth:** It's important to warm up the engine with a long idle period, especially in cold weather.

**Fact:** With today's diesel engines, manufacturers routinely suggest a warm-up time of less than five minutes. In fact, running an engine at low speed (idling) causes significantly more wear on internal parts compared to driving at regular speeds.

**Myth:** It's better for an engine to run at low speed (idling) than to run at regular speeds.

**Fact:** Running an engine at low speed causes twice the wear on internal parts compared to driving at regular speeds.

**Myth:** The engine must be kept running in order to operate the vehicle lights and heating/cooling. It's impossible to run this equipment off the internal circuitry of the vehicle because the battery will run down.

**Fact:** Lights and heating/cooling can be operated without the engine running through re-wired circuitry for up to an hour with no ill effects on the electrical system of the vehicle.

**Myth:** Idling is necessary to keep the cabin comfortable.

**Fact:** Depending on the weather, many vehicles will maintain a comfortable interior temperature for a while without idling. Idling is also not an efficient way to keep the cabin warm. Routes should be timed so drivers do not need to spend a lot of extra time in the vehicle when it is not en route, particularly in hot or cold weather. In addition, auxiliary heaters can be purchased and installed to keep the cabin comfortable.

**Myth:** It's better to just leave the engine idling because a cold start produces more pollution.

**Fact:** An EPA study found that the emission pulse measured after a diesel vehicle is restarted contains less carbon monoxide, nitrogen oxides, and other pollutants than if the vehicle idled continuously over a 10-minute period. The analysis indicated that continuous idling for more than three minutes resulted in more fine particle (soot) emissions than at restart.

## Contact Us

If you have further questions, please contact the Oklahoma Department of Environmental Quality's Air Quality Division at (405) 702-4100.