



Idling

Myths, Facts and Information

Myth 1: Engines must idle to warm up before driving.

While it is true that engines must be warmed up to operate efficiently, in general, idling is not the best way to do so. The most efficient way to warm an engine is by driving the vehicle. With modern engines, you need no more than about 30 seconds of idling before driving away on the coldest winter days.

Driving a vehicle cuts warm-up times in half. This reduces fuel consumption and emissions that

Every 30 minutes of idling costs you at least 2/10 (0.2) of a gallon of gas - and up about 7/10 (0.7) of a gallon for an 8-cylinder engine.

Every gallon of gas you use you also produce about 19 pounds of carbon dioxide.

can cause air pollution.

The catalytic converter - the device that cleans pollutants from the vehicle exhaust - does not function at its peak until it reaches between 750° and 1500° F.

The best way to warm the converter is to drive the vehicle. Idling emits more pollution if the catalytic converter is not working properly.

In winter conditions, emissions from idling vehicles are more than double the normal level immediately after a cold start. Warming up the engine means more than just the engine. The tires, trans-

mission, wheel bearings and other moving parts also need to warm for the vehicle to perform well. Most of these parts do not warm until the vehicle is driven.

It's important to drive away as soon as possible after a cold start just avoid high speeds and rapid acceleration for the first 3-5 miles. This lets the whole vehicle reach peak operating temperature as quickly as possible without paying a fuel penalty.

If your vehicle has a diesel engine, idling actually lowers the coolant temperature faster than shutting off the engine. In other words, switching off the engine keeps the engine warm longer.

Myth 2: Idling is good for your engine.

Excessive idling can actually damage your engine components, including cylinders, spark plugs, and exhaust systems.

An idling engine is not operating at its peak temperature, which means that fuel does not undergo complete combustion.

This leaves fuel residue that can condense on cylinder walls, where they can contaminate the oil and damage parts of the engine.

For example, fuel residues are often deposited on spark plugs. As you spend more time idling, the average temperature of the spark plug drops.

This makes the plug get dirty more quickly, which increases fuel consumption by 4 to 5 %.

Excessive idling also lets water condense in the vehicle's exhaust, leading to corrosion and a reduction of the life of your exhaust system.

When not actively driving, people tend to idle their cars largely for one of two reasons: either to warm up the engine before driving or due to waiting to drop off or pick up kids, or sitting in car wash lines, drive-thru lanes, etc.

By understanding the effects of idling and reducing the practice, you can improve your car's performance, save money, and reduce needless air pollution emissions.

Idling gets you nowhere - and it can be costly. Excessive idling wastes an enormous amount of fuel and money and generates needless emissions which cause air pollution, effecting our health and wellbeing.

Myth 3: Shutting off and restarting your vehicle uses more gas than if you leave it running.

The bottom line is that just 10 seconds of idling uses more fuel than restarting the engine. As a rule of thumb, if you are going to stop for 10 seconds or more - except in traffic - turn off the engine.

Restarting a car many times has little impact on engine components such as the battery and the starter motor. The wear on parts that restarting the engine causes adds about \$10 a year to the cost of driving - money that you'll likely recover several times over in fuel savings.



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Fact: Idling contributes to respiratory illness.

The emissions of even today's modern vehicles contain Carbon Monoxide, Nitrogen Oxide, Sulfur Dioxide, Benzene and several other toxic chemicals that impair our lungs and heart.

Children, the elderly, and individuals with asthma are especially at high-risk.

These emissions contribute to the formation of ground level ozone which has been proven to increase serious health problems which result in missed school days for children, missed work days for adults and millions of dollars in health care costs in North Carolina alone.

Fact: Idling damages engine components in our vehicles.

Idling is not an effective way of warming up your engine, as your vehicle is made up of many moving parts. To properly warm your vehicle's transmission, tires, suspension, steering and wheel bearings, you need to slowly drive-off.

An idling engine is not operating at peak temperature, resulting in incomplete fuel combustion.

Fuel residues can condense on cylinder walls, contaminate oil and damage engine components.

With more engine idling these residues tend to deposit on spark plugs. This allows deposits to build up on the plugs which can increase fuel

For more information about air pollution & health, or for commute options, visit www.triadair.org

Fact: Idling can harm our health.

Children are particularly vulnerable to air pollution because they breathe faster than adults and inhale more air per pound of body weight.

Many people believe that they are protected from air pollution if they remain inside their vehicles. Not so according to a report by the International Center for Technology Assessment (CTA).

CTA found that exposure to most auto pollutants, including volatile organic compounds (VOCs) and carbon monoxide (CO), is much higher inside vehicles than at the road side.

VOCs and CO are linked to serious health problems -- like respiratory

consumption by 4 to 5 %.

Excessive idling can also cause water to condense in the vehicle's exhaust. This can lead to corrosion and reduce the life of the exhaust system.

On the other hand, frequent restarting has little impact on engine components such as the starter motor and the battery.

A poorly tuned engine uses up to 15 % more energy when idling than a well-tuned vehicle.

Keeping your vehicle in good condition is a key to fuel efficiency and reduced harmful emissions.

Idling your vehicle with the air conditioner on (to keep the interior cool) can increase emissions by 13 %.

infections and cancer, and are known to shorten life.

The highest exposure occurs when sitting in traffic congestion on highways or in a line-up of idling vehicles at a school or drive-through. Idling is linked to increases in asthma, allergies, heart and lung disease and cancer.

Fact: Idling wastes fuel.

In this time of ever increasing gas prices, needless idling burns your hard earned dollars through your exhaust pipe.

And, remember that fossil fuels are a non-renewable resource and are being depleted in the face of ever increasing world demand

- *Idling for one hour burns nearly one gallon of gasoline.*
- *Idling your vehicle for just 10 minutes can use as much fuel as it takes to travel 5 miles.*
- *Idling your vehicle for 10 minutes a day uses more than 27 gallons of fuel a year.*
- *Nine billion gallons of fuel are wasted in traffic each year. That's 800 times the amount of oil spilled by the Exxon Valdez.*
- *The typical household spends nearly 20% of its income on driving costs, more than it spends on food.*

Some sources:
www.consumerenergycenter.org/myths/idling.html

<http://www.cleanairbc.com/>