Emission Information

The Hazards of Vehicle Emissions

The damage done by vehicle emissions is very real. Some statistics highlight the impact on people's lives:

- The World Health Organisation estimates that 7 million people died worldwide due to exposure to air pollution during 2012. [1]
- In Scotland, 368,000 people (1 in 14) are currently receiving treatment for asthma. This includes 72,000 children and 296,000 adults. [2]
- 62% of asthma sufferers tell us that traffic fumes aggravate their asthma.
- Both Petrol and Diesel emissions contain chemicals which is known to cause Cancer and other serious illnesses. [3]

What makes up Exhaust Emissions?

- **Nitrogen** (N2) – no adverse effects
- **Oxygen** (O2) – no adverse affects
- **Water** (H2O) – no adverse affects
- **Carbon Dioxide** (CO2) – non-toxic gas but contributes towards acidification of oceans and one of the most important greenhouse gases. Governments around the world are pursuing policies to reduce CO2 emissions to combat global warming.
- **Carbon Monoxide** (CO) – results from incomplete combustion of fuel. CO reduces the ability of blood to carry oxygen and can cause headaches, respiratory problems and, at high concentrations, even death.
- **Oxides of Nitrogen** (NOx) – produced in any combustion process, NOx emissions are oxidised in the atmosphere and contribute to acid rain. They also react with hydrocarbons to produce photochemical oxidants, which can harm plants and animals.
- **Sulphur Dioxide** (SO2) – sulphur occurs naturally in the crude oil from which petrol and diesel are refined. It forms acids on combustion leading to acid rain and engine corrosion. It also contributes to the formation of ozone and of particulate matter. Sulphur can also adversely affect the performance of catalytic converters and is now removed from both petrol and diesel during the refining process.
- **Hydrocarbons** (HC) – HCs are emitted from vehicle exhausts as unburnt fuel and also through evaporation from the fuel tank, from the nozzle when you fill up and also at stages through the fuel supply chain. They react with NOx in sunlight to produce photochemical oxidants (including ozone), which irritate the eyes and throat.
- **Benzene** (C6H6) – aturally occurring in small quantities (less than 2%) in petrol and diesel, Benzene is emitted from vehicle exhausts as unburnt fuel and also through evaporation from the fuel system although modern fuel systems are sealed and have carbon canisters to hold the vapours. Benzene is toxic and carcinogenic. Long-term exposure has been linked with leukaemia.
- **Lead** (Pb) – lead accumulates in body systems and is known to interfere with the normal production of red blood cells. Following the introduction of unleaded petrol and withdrawal of leaded petrol lead is essentially eliminated as an exhaust product. Lead emissions are no longer considered a problem.
- **Particulates** (PM) – particulate matter is partly burned fuel associated mainly with diesel engines. PM10s are very small particles that can pass deep into the lungs causing respiratory complaints. Modern diesel cars are fitted with Diesel Particulate Filters (DPF) to stop these particles passing into the atmosphere.

Source: The AA

Air Quality in Scotland.

The Scottish Government, provides a network of air monitoring stations around the country with nearly realtime information on the air around us. To see how how the air you breathe changes minute by minute please visit them by clicking HERE.

Idling – What's the harm?

The practice of vehicle idling, results in high running costs and air pollution levels for drivers.
If each one of the estimated 80,000 cars on the road in Central Scotland idled for just 10 minutes a week, a staggering 416,000 litres of petrol could be wasted each year!
Did you know?
1. 10 seconds of engine idling uses more fuel than restarting (California Energy Commission).
2. 62% of people with asthma say that traffic fumes stop them in their tracks (Asthma UK).
3. Vehicle Idling wastes money
4. In 2005 air pollution contributed to 650 deaths per million people in the UK (3000 in London alone) (European Environment Agency).
5. In UK, air pollution is responsible for a loss of approximately six months of life expectancy (Health Protection Scotland).
6. Air pollution is responsible for 1 in 8 global deaths (World Health Organisation).

To report Smoky or Idling Vehicles contact the Hotline Number 01845 451 888

The Scottish Government Riaghaltas na h-Alba · East Lothian Council · West Lothian Council · Midlothian · Falkirk Council

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