

# REAL

April 2023

# Torque

# Engine Idling

**Idling is when a truck's engine is running, but the truck is not moving.**

Some examples of this can be:

- ▶ **When the truck is stopped in traffic.**
- ▶ **Running the engine while it is being loaded or unloaded.**
- ▶ **Starting up first thing in the morning to 'warm up' the engine.**
- ▶ **Keeping the engine running to use the AC or to heat the cabin.**

Running a truck's engine to use the PTO is not classed as idling as the engine is being used to drive a hydraulic pump.

**Idling is bad for the environment.**



Idling has a negative impact on the environment. When a truck is idling, it is emitting exhaust fumes into the air, which contributes to local air pollution by increasing the number of particles in the air. This also has a greater impact on our overall carbon dioxide emissions.

A recent Transport Energy/Emission Research report from Australia found that trucks can be idling up for as much as 20 per cent of their drive time. The report found that engine idling contributes up to 8 per cent of total carbon dioxide emissions over the journey, depending on the vehicle type.

To put that into perspective, removing idling would be like removing up to 320,000 cars from New Zealand roads.

When an engine is idling it is causing additional wear and tear on the engine's mechanical components. It can also lead to excessive carbon build up on the piston and internal components like EGR coolers and intake manifolds. This leads to accelerated wear and increased oil consumption. In some cases, excessive carbon build up can lead to scoring on the engine cylinder wall and even broken piston rings.



**Figure 1 - Piston with excessive carbon (soot) build-up and a broken piston ring.**



**Figure 2 - Scored cylinder liner caused by a build-up of carbon on the piston due to high idle time.**

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## Fuel use.

Switching off an engine can lower your fuel costs. The amount of fuel a truck wastes while idling ranges from between 3 to 10L per hour depending on its engine size. Currently, diesel costs an average of \$2.10 per litre, which works out to be between \$6.30 to \$21.00 each hour. To give context at a wider scale, a recent report found that in the U.S. alone, engine idling wastes more than NZ\$29 billion.



## Fact!

In New York, the law states that heavy-duty trucks and buses must not idle for more than 5 minutes. If they do, they can be fined over NZ\$3,000!



# myth busting

- ▶ You must warm up a truck engine for 10 -15mins before driving off. This is not the case. Modern engines with emission controls and warm up software programs, coupled with improved lubricants are ready for work pretty much straight away. Idling for prolonged periods simply wastes fuel and provides no tangible benefits. In modern engines no more than 1-3 minutes is needed.
- ▶ The myth that switching off your engine and then turning it back on is bad for your vehicle isn't true. It may have an impact on your battery and starter, but it is minimal and no reason not to switch off.
- ▶ If you idle for 10 seconds or more, then turning off your engine and turning it back on does not burn more fuel than idling. So stick to the 10-second rule. If you're idling for more than 10 seconds, turn off your engine.



## Tips and Tricks

- ▶ Turn your engine off when not needed to reduce idling.
- ▶ Where possible, better route planning can help avoid traffic congestion to reduce idling time.
- ▶ Being aware of the environmental and fuel consumption impacts can be enough to help reduce idling.
- ▶ Consider making use of telematics to identify idling trends and target ways to reduce it.
- ▶ TR Driver Training has a Safe and Fuel-Efficient Driving (SAFED NZ) course available to help with reducing idling and increasing fuel efficiency.

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