



CRAZ IDLE-FREE BUSINESS MANUAL

In partnership with





INTRODUCTION

The Calgary Region Airshed Zone is pleased to be a part of your Idle-Free Business campaign. The resources in this manual will assist in establishing your business as an idle-free zone. The materials will provide direction and instruction for heightening driver awareness of the harm created by vehicle emissions.

CRAZ is pleased to provide training in any aspect of this manual including employee training, as well as implementation. It is advised that a coordinator be selected in each department to manage the idle-free events of their team. This coordinator will ensure their co-workers understand the air quality effects resulting from idling, as well as the goals of this initiative. A representative from CRAZ is available to any organization interested in hosting a speaker to educate employees on air quality and idling.

Through the acquired knowledge of this campaign, employees will learn to make better lifestyle choices and be in a better position to positively influence the behaviour of drivers.

If you have any questions regarding this manual and training, please contact Tanya Carlson at Tanya.carlson@craz.ca or (403)968-5522 for assistance.

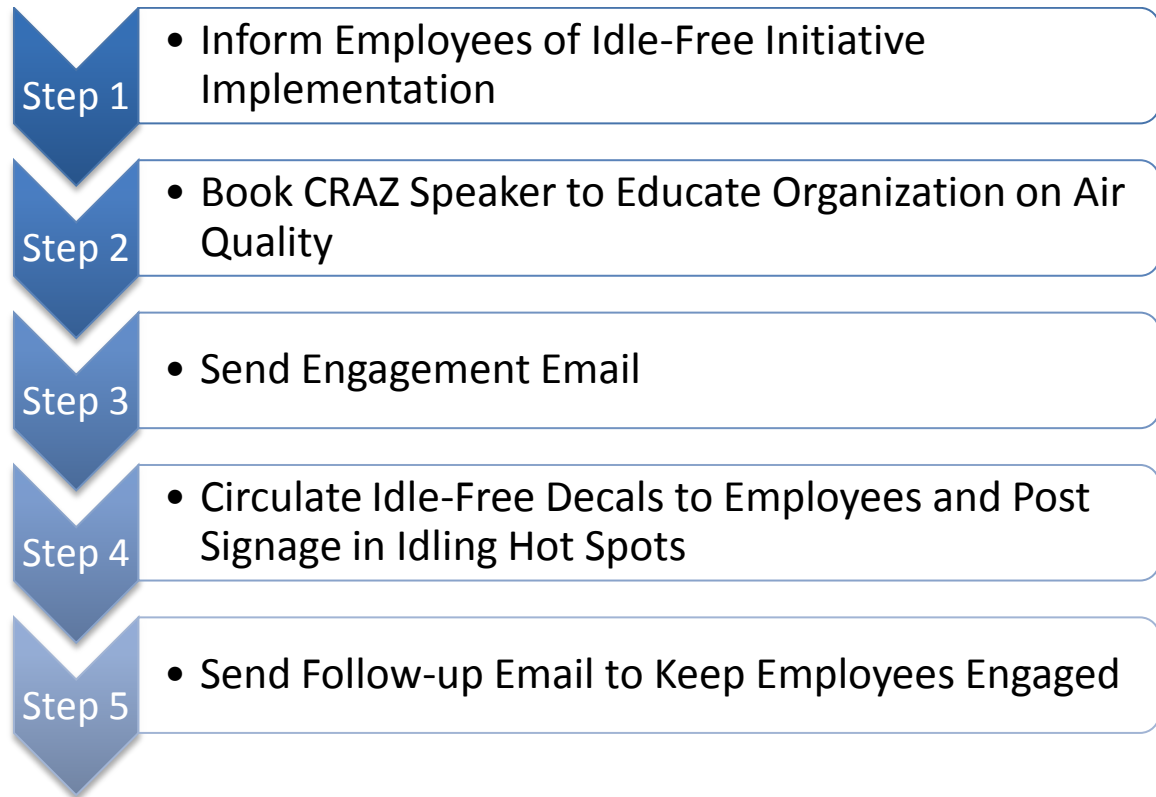


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IDLE FREE FLOW CHART





SAMPLE EMAIL SCRIPTS

Informational/Engagement Email

[Your organization] has recently adopted an idle-free policy to be implemented immediately. With the support of the Calgary Region Airshed Zone (CRAZ), this organization has the tools it needs to successfully reduce our environmental foot print involving air quality. Most citizens already work to protect the environment by participating in community programs, such as recycling. Similarly, adopting an idle-free policy is just as simple and meaningful, if not more so.

When you don't idle your engine, you reduce the amount of gas you use. This means you'll save money on fuel. In addition, engine exhaust, as you know, is unhealthy to breathe. By turning your engine off, you and others around you won't have to breathe in fumes from a vehicle that is going nowhere.

[Your organization] is encouraging personal vehicle owners as well as company vehicle operators to turn their engines off when stopped for more than 10 seconds, except in traffic. We are asking employees to make a commitment to turn off their engines when they're parked by placing this vinyl decal on their windows. The decal serves as a reminder for you to turn your engine off, and also tells others of your commitment to reduce engine idling. The vinyl decal has been designed so that it can be easily removed from your window at a later time. Signage will also be posted on the premises in support of this initiative.

Turn your key, be idle free.

Follow-up Email

In [month], this organization adopted an idle-free policy for all its employees. Since then, [#] people have made the commitment by installing a vinyl decal in their vehicle. Thanks for showing your commitment to the initiative.

If you have not yet received or installed a decal in your vehicle, contact [insert contact] and get yours today! Turn off your engine when stopped for more than 10 seconds, except in traffic to save money and harmful emissions.

Turn your key, be idle free.



IDLING FACTS

Drivers idle their vehicles for a number of reasons. The fact sheets provided in this section of the manual offers valuable information you can share in assemblies, classroom presentations, or in newsletters. Hopefully, this information will be useful in assisting you in bringing about positive changes on the activity of idling.

By sharing this information with your school community, you can help drivers become more aware of the harm idling poses, not only to our physical health, but also to our environment. While you are establishing your idle free campaign you may encounter some individuals who are reluctant to participate in the program. Their reluctance to alter their driving behaviours may be based on idling myths. It is important to have research data available to assist you in your goal to educate drivers on the facts concerning idling.

What is the “profile” of a typical idler?

It’s safe to assume that most Canadian motorists so some idling. However, research shows some interesting trends. For example, the amount a driver idles tends to increase with the number of people in the household. A driver living with children is more likely to idle than one without children. As well, the frequency of idling appears to decrease as a person ages – a retiree is the least likely to idle. A person living in a rural area is more likely to idle than a driver in an urban centre.

Why do Canadians idle?

Warming up or cooling down a vehicle is the most common reason given for idling, in the winter and summer. Surveys show that Canadians also idle their vehicles for many other reasons that include:

- Waiting for passengers
- Stopping at railway crossings
- Waiting to park
- Running quick errands
- Sitting in drive-through lanes
- Waiting to refuel or to have the car washed
- Stopping to talk to an acquaintance or friend
- Preparing to leave the house



Calculations drawn from a Canadian survey of driving habits and behaviour suggest that in the peak of winter, many Canadian motorists idle their vehicles for about eight minutes a day, resulting in a combined total of more than 75 million minutes of idling a day. This day alone uses over 2.2 million litres of fuel and produces over five million kilograms of greenhouse gases (GHGs) and is equal to the amount of fuel required to drive over 1100 vehicles for a year or to idle one vehicle for 144 years!

If stopped for more than 10 seconds (except in traffic) turn the engine off. Unnecessary idling wastes money and fuel, and produces greenhouse gases (GHGs) that contribute to climate change.

1. What's the problem with idling?
 - a. Pollutants – A variety of pollutants given off from vehicle emissions that impact our health and the environment. Of particular concern are particulate matter and carbon dioxide.
 - b. Pollutants impact our air quality. Poor air quality affects all living things.
 - c. For humans, vehicle emissions impact our health, especially those with respiratory problems. Particulate matter (PM) is breathed deep into the lungs.
 - d. Impacts on the wallet – Wastes gas and money
 - i. If you idle your vehicle for more than 10 seconds, you use more fuel than it would take to restart your engine.
2. Some solutions to idling include:
 - a. Reduce your time idling – don't arrive at school early for pick-up, don't go through drive-thru restaurants etc.
 - b. Turn vehicles off (go inside and wait)
3. With today's computer-controlled engines, even on cold winter days, your vehicle is suitable to be driven as soon as the windows are clear of snow and ice.
4. Cars warm faster and operate more efficiently when being driven. Warming up the vehicle means more than warming the engine. The tires, transmission, wheel bearings and other moving parts also need to be warmed up for the vehicle to perform well. Most of these parts don't begin to warm up until you drive the vehicle.
5. Vehicle engine emissions create ground level ozone. Ozone is a respiratory irritant. Walk or bike whenever you can to reduce vehicle use.



6. If every driver of a light duty vehicle avoided idling by three minutes a day, collectively over the year, we would save 630 million litres of fuel and \$630 million annually in fuel costs (assuming fuel costs are \$1.00/L).
7. You can help reduce the impact of cold starts – and reduce idling times – by using a block heater on cold winter days. This device warms the coolant, which in turn warms the engine block and lubricants. The engine will start more easily and reach its proper operating temperature faster.
8. You don't need to leave a block heater plugged in overnight to warm the engine – two hours is more than enough. In fact, you can use an automatic timer to switch on the block heater two hours before you leave. At -20°C, block heaters can improve overall fuel economy by as much as 10%. For a single short trip at -25°C, your fuel savings could be in the order of 25%.
9. A poorly-tuned engine uses up to 15% more energy when idling than a well-tuned engine. Keeping your vehicle properly maintained according to the manufacturer's suggested maintenance schedule is a key to fuel efficiency.
10. Calculations drawn from a 1998 survey on driving habits suggest that in the peak of winter, Canadians voluntarily idle their vehicles for a combined total of more than 75 million minutes a day – equal to one vehicle idling for 144 years. We idle about 40% less in summer, but Canadian motorists still waste a significant amount of fuel and emit unnecessary air pollutants.
11. Many drivers also mistakenly believe that turning off their engines for a short stop is more harmful to their car than leaving the engine running. An idling gas engine burns about 3.5 litres an hour. Ten seconds of idling uses more fuel than restarting the engine!
12. Approximately \$1.8 million of fuel is idled away by Canadians every day. An idling engine produces twice as many exhaust emissions as an engine in motion, significantly contributing to local air pollution.
13. An idling engine is not operating at its peak temperature, which means fuel combustion is incomplete. Soot deposits can accumulate on cylinder walls leading to oil contamination and damaged components. Idling, while warming an engine does not warm the wheel bearings, steering, transmission and tires – only driving does this.
14. Children are particularly vulnerable to air pollution because they breathe faster than adults and inhale more air per pound of body weight. Smog levels tend to be worse in the late afternoon, precisely when driving parents accumulate around the



schoolyard. This glut of idling engines contributes to the bubble of smog that engulfs the school and into which rush excited and active children.

When you are dropping off or picking up your children at school, please stop in a safe, legal parking space and turn off your engine. Then safely walk your children to and from the school.

Help to make your school an idle-free zone. We'll all breathe a little easier.

15. Frequent starting has little impact on engine components like battery and starter motors. Wear caused by restarting is estimated to add \$10.00 per year to the cost of driving, money likely recovered several times over in fuel savings (Natural Resources of Canada).
16. Exposure to vehicle exhaust increases the risk of death from heart and lung disease and lung cancer.
17. Children's asthma symptoms increase as a result of car exhaust.



REDUCE YOUR VEHICLE'S IMPACT

One easy way to cut fuel consumption, save money and reduce emissions is to avoid unnecessary idling. Countries around the world are concerned with the impact of transportation on the environment and human health. Messages to reduce unnecessary idling are therefore a key component of many national climate change programs.

You can achieve savings and reduce your vehicle's impact on the environment by following these tips:

- **Consult your owner's manual.** It contains important information about how to drive and maintain your vehicle for optimum performance and efficiency.
- **Follow the manufacturer's recommended maintenance schedule.** A poorly maintained vehicle can cost the equivalent of up to 15 cents more per litre on fuel.
- **Check fluid levels at least once a month.** Check and change the engine oil, engine coolant, transmission fluid and power steering fluid according to the manufacturer's recommendations in your owner's manual. Also check around and under the vehicle for fluid leaks. If there are leaks, have them repaired.
- **Measure your tire pressure at least once a month.** Inflate cold tires to the recommended pressure. The correct tire inflation information for your vehicle is usually indicated near the driver's door, in the glove compartment or in the owner's manual. For every 28 kilopascals (4 pounds per square inch) of under-inflation, fuel use increase by about 2%. Properly inflated tires will last longer, make your vehicle safer to drive and save fuel.
- **Reduce idling.** Idling for more than 10 seconds uses more fuel than it takes to restart your vehicle. If you think you are going to be stopped for more than 10 seconds, except in traffic, turn off your engine. The break-even point to offset any incremental maintenance costs is under 60 seconds.
- **Warm up your vehicle by driving it at a moderate speed.** In most cases, you need no more than 2-3 minutes of idling from a cold start on winter days. Of course, ensure your windows are free of ice and snow before driving. Vehicle components, such as wheel bearings, steering, suspension, transmission and tires, are best warmed up by driving the vehicle.
- **Use a block heater in the winter to warm your engine before starting.** A cold engine is at its worst for fuel consumption, engine wear and exhaust emissions. Block heaters can improve overall winter fuel economy by pre-warming the engine,



coolant, and oil. Use an automatic timer to turn on the block heater no more than two hours before you plan to drive.

- **Do not overuse your remote starter.** People with remote starters sometimes start their vehicles long before they are ready to drive. Remote starts can result in needless idling and wasted fuel. If you use a remote starter, start your vehicle shortly before you are ready to drive away.
- **Avoid speeding.** Increasing your highway speed from 100 km/h to 120 km/h can increase your fuel consumption by up to 20%.
- **Use cruise control.** Under normal driving conditions, cruise control saves fuel on the highway by keeping your speed constant and avoiding inadvertent speeding. Check your owner's manual regarding the safe operation of your vehicle's cruise control system.
- **Use your air conditioning sparingly.** Air conditioning can increase fuel consumption by up to 20% due to the extra load on the engine. Use your vehicle's flow-through ventilation on the highway, or open a window during city driving. If you use your vehicle's air conditioning, set the controls to a comfort level that allows the system to shut off once the vehicle's interior is cool. Refer to the owner's manual for information on your vehicle's air conditioning system.
- **Remove unnecessary weight.** If you add weight to your vehicle for extra traction in the winter months, remember to remove it when the snow melts. Unnecessary weight can result in waster fuel and needless CO2 emissions.
- **Take off the roof rack.** A loaded or empty roof rack increases fuel consumption through aerodynamic drag. A removable roof rack, installed only when needed, is your best option.
- **Adopt fuel-efficient driving habits.** Accelerate smoothly, as abrupt starts and stops waste fuel. Plan your driving and look ahead of traffic. Anticipate problems and keep a safe distance between your vehicle and the one ahead to avoid sudden braking.
- **Make one long trip instead of several short trips.** Plan to combine your trips as taking short trips burns more fuel, regardless of the season, because the engine and drive train do not reach their most efficient operating temperatures.
- **Leave the vehicle at home, or park partway to your destination.** Walk, cycle, car pool or take public transit whenever you can.

IDLE-FREE INITIATIVE MATERIAL ORDER FORM

MATERIAL	SIZE	CURRENT PRICE	QUANTITY	TOTAL
Vinyl Decal	4.5 by 2.5 inches	\$1.15 each/3 colour		\$
Metal Idle-Free Sign	12 by 16.5 inches	\$30.30		\$

METAL SIGN



VINYL DECAL



**Specialty signs and decals are available that include the logo of your organization. Contact Alyssa.Gerling@calgary.ca for info.*

Members of the Calgary Region Airshed Zone receive these materials free of charge.

Are you a paid member of CRAZ? (Check one) Yes No

Please make cheques payable to the Calgary Region Airshed Zone. Ensure that this form is included with the payment.

Company: _____

Name: _____

Mailing Address: _____

Email: _____

Phone: _____

Signature: _____