



5 THINGS YOU DIDN'T KNOW ABOUT SPARK PLUGS

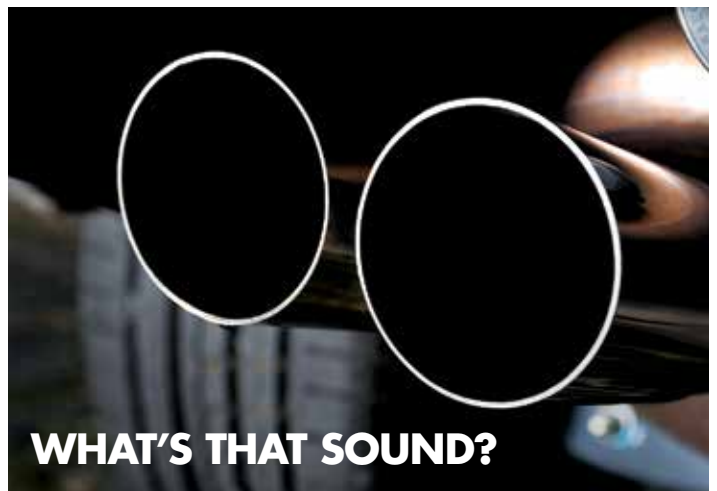
intune

ACDelco®

- 1. Early adopter** – The use of a spark device to ignite a fuel-air mixture was first demonstrated way back in 1777 by Italian physicist Alessandro Volta, who also advanced the study of electrical capacitance. The scientific world was suitably impressed and dubbed the unit of electrical potential after him: volt. He also invented the conventional storage battery. Smart guy.
- 2. A big jolt** – A minimum of 20,000 volts is required for most spark plugs in an automotive internal-combustion engine, but modern engines' ignition systems can generate 40,000 volts or more.
- 3. Hot stuff** – Within the first 2 nanoseconds of its arc, the spark reaches 55,538°C (100,000°F) – about 10 times hotter than the surface of the sun.
- 4. Out of this world** – Iridium is used in many plugs to increase durability. A member of the platinum group of metals, iridium is one of the densest chemical elements and is very heat resistant. Because of its abundance in the earth's crust, its existence is largely attributed to meteorite impacts millions of years ago.
- 5. Wood you believe it?** – The ceramic material used in the spark plug insulator – the white body that wraps around the central terminal – is composed mostly of an aluminum oxide material designed to withstand the heat and pressure generated by the voltage that passes

through the plug. That wasn't always the case, however. Early spark plug designs used porcelain, mica (a silicate mineral), glass and even – we are not making this up – wood.

To learn more about ACDelco spark plugs, visit ACDelcoCanada.com



WHAT'S THAT SOUND?

Is there a buzzing or rattling sound that seems to come from beneath your vehicle's floor, either at idle or when accelerating? It could be a loose shield around the exhaust system – and something your **ACDelco Professional Service Centre Program affiliate could diagnosis in a jiffy. Just ask!**

KEEP CHILLED THIS SUMMER



During a hot summer, there's nothing worse than an air conditioning system that doesn't cool you down in the car. Have yours inspected if any of the following symptoms are present:

- The air blowing out of the vents is cool, but not as cold as it used to be.
- Performance is spotty or intermittent – it will blow cold, but seems to cut out for a while before blowing cold again.
- The floor is inexplicably wet. (The water drain hole may be plugged.)
- There is excessive noise when the AC is on.
- There is an odour – if it smells like a musty gym locker when the AC is on, have the system inspected right away for mold or bacteria that like to grow in dark, damp places such as the evaporator.

Ask your ACDelco Professional Service Centre Program member to perform an inspection and make necessary repairs on your vehicle's AC system. ACDelco has the parts to repair most vehicles on the road. It's your surefire way to keep cool for the rest of the summer!

DID YOU KNOW?

That little puddle that forms under your car after running the AC is water that has drained from the air conditioning system's evaporator. As air passes over the evaporator's fins, moisture condenses on the fins and flows out of the vehicle through the drain.



BY THE NUMBERS – BUICK EDITION

1,170,115 – The number of Buick vehicles sold globally in 2014 – an all-time record.

1903 – The year Buick was incorporated under founder David Dunbar Buick.

225/571.5 – The length in inches and centimetres of the first Buick Electra 225 model – a car that would be affectionately nicknamed the “deuce and a quarter.”

37 – The number of Buick automobiles built in 1904.

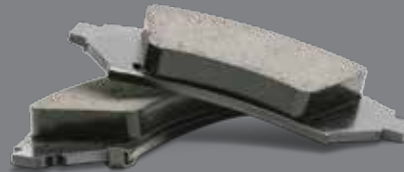
9 – The number of cylinders in the radial engine that powered the M18 Hellcat tank built by Buick during World War II. It also used an early automotive automatic transmission.

ACDelcoCanada.com

©2015 General Motors. All rights reserved.
AC103431

ALL ABOUT BRAKES

When you press the brake pedal, fluid is forced through lines that run to each wheel, causing pads to squeeze against rotors or shoes to push against drums to create friction that slows the wheels. That's a simplified description, but here's what you need to know about brake maintenance and why it's important.



Why do brakes need to be inspected or replaced?

Their performance depends on friction, and the involved parts wear down. The friction material on the pads and shoes wears away, and the rotors and drums can be damaged by worn pads/shoes or warp under hard use and the heat generated by friction. Maintaining and replacing those parts should not be ignored, because the longer you drive with worn or inadequate brakes, the worse the performance will get—and it may just prove more expensive when you finally take action.

The brakes shudder and shake when I step on the pedal. What's wrong?

The disc rotors could be warped, creating an uneven surface as the pads try to “grab” them. Even if that's not the cause, shaking and shuddering under braking can affect braking performance and the condition should be examined immediately.

I heard a squealing sound for a while, but it went away. Does that mean the brakes are OK again?

No! The squeaking/squealing sound was caused by wear indicators built into the disc brake pads as they rubbed against the disc rotor. That means there was

only about 1/16 of an inch of pad material left. “Burning” through the wear indicators so they no longer make noise (because they were worn away) means you have less than 1/16 of an inch of pad material to stop your vehicle. Have the brakes inspected immediately!

Why is it more expensive to repair the brakes if I wait a while?

That's not always the case, but as the pads or shoes wear beyond their usable life, they can dig into the disc rotors or drums, generating damage that could have been avoided. With regular inspections, you may only have to make periodic pad or shoe replacements, which is typically much less expensive than replacing the rotors, calipers or drums.

But aren't all brake jobs expensive?

They don't have to be. Replacing only the pads can prolong the life of other brake components. Your ACDelco-affiliated Professional Service Centre can check them and measure the life left in the pads. Your technician can also suggest a variety of value-priced ACDelco Advantage, Professional DuraStop and GM Original Equipment brake-parts options to fit your budget.

ACDelco