



AUTOMOTIVE ENGINEERING

FACT SHEET



ROAD DE-ICERS AND RUST-RELATED VEHICLE DAMAGE

BACKGROUND

In regions of the U.S. where winter weather is prevalent, de-icers are used before, during and after storms to make the roadways safe for travel. For many years, transportation departments have used rock salt or liquid de-icers to combat snow and ice on the roads. Unfortunately, these chemicals can also rust and corrode vehicle components.

Beyond cosmetic issues, rust damage can cause serious and dangerous damage to a vehicle's brakes, fuel tank, and exhaust systems. Fortunately, this prevalent issue can be lessened with proper vehicle maintenance.

AAA surveyed U.S. drivers to understand the cost and frequency of salt-related rust damage to vehicles.

To understand the impact that de-icers have on vehicles, AAA pursued four lines of inquiry:

1. How many U.S. drivers currently live or have lived in an area that gets snow and ice?
2. Are U.S. drivers that reside in these climates concerned about damage to their vehicle from salt and other chemicals used on roads to melt snow and ice?
3. In the last five years, how often have U.S. drivers had vehicle repairs as a result of rust damage caused by salt and other de-icers?
4. What is the average repair bill for salt-related rust damage?

KEY FINDINGS

- **Seven in ten (70 percent) U.S. drivers** either currently live, or in the past five years have lived, in a winter climate region.
- **Half (51 percent) of U.S. drivers** living in winter climate regions **are concerned about the damage** that salt and other chemicals used to melt snow and ice on the roads may cause to their vehicle.
- In the past five years, **15 percent of U.S. drivers** living in winter climate regions had to get their **vehicle repaired at least once because of rust damage caused by salt and other chemicals** used to melt snow and ice on roadways.
- In total, **the cost to repair salt-related rust damage is estimated at \$15.4 billion** over the last five years. On an annual basis, rust-related damage is **estimated to cost U.S. drivers more than \$3 billion**.
- Among those who had at least one vehicle repair related to rust damage, the average number of these repairs over the past five years was one-and-a-half and **cost an average of \$490 per repair**.

AAA RECOMMENDATIONS

AAA strongly urges drivers who experience the following vehicle malfunctions to immediately move the vehicle off the road to a safe location and then have it towed to a trusted repair facility:

- In-dash warning lights for brakes or other critical systems.
- A “spongy” or soft feeling when applying pressure to the brake pedal.
- The smell of fuel or other fumes in or around the vehicle.

While some rust damage is unavoidable, AAA recommends drivers take the following preventative steps in order to reduce the possibility of vehicle damage:

- Thoroughly wash and clean your vehicle prior to winter.
- Repair body damage that could de-icing chemicals.
- Touch up paint scratches and chips where bare metal is exposed.
- Apply a good coating of wax to protect the finish.
- Try to limit driving immediately before, during and after winter storms when de-icing chemicals are being applied and are at their highest concentrations.
- Frequently wash the entire vehicle, including the undercarriage, using a detergent formulated for use on a vehicle – not dish washing soap – to loosen, dissolve and neutralize newer road salts.
- Give the undercarriage one last cleaning in the spring, any deposits left over from winter can continue to cause corrosion year-round if not properly removed.



METHODOLOGY

Between Sept. 22 and 25, 2016, one wave of an omnibus telephone survey was conducted in the continental United States. A total of 1,001 interviews were completed among drivers ages 18 and older.

A dual-frame approach was used that combined landline and cell phone interviews to ensure that adults who primarily communicate via cell phones were properly represented.

Survey responses were weighted by five variables (age, gender, region, race/ethnicity and education) to ensure reliable and accurate representation of the country’s total population of those 18 and older.

The study results have an average statistical error rate of +/- 3 percent at the 95 percent confidence level.