

Does Success Spoil Safety - CAN/ULC-S338 – Automobile Theft Deterrent Systems

This may have happened to you. In the mid 90's I brought my Grand Caravan 40 miles in from our home in the country to the dealer for minor body repairs after it was hit in a parking lot. The work I was told would take 7 days. 3 days after dropping it off I got a call from the Ottawa police wanting to know why I had left my van on a city street in a bad neighbourhood. Puzzled, I told the police that my van was at the dealer's for repair so were they sure it was ours. Absolutely Mr. Dulmage they said as they described the van and added that the driver's door and the back hatch were damaged. Hm, strange I've had no call from the dealer looking for it. It was a long weekend but on Monday we ran into our local garage owner who did the day to day maintenance on our vehicles. He told us that the dealer's service manager had called him at home Monday to say that we must have picked up our van because it wasn't there. It turned out the van was stolen but it was the ease of it that surprised me. The van had an interlock device that went under the dash which you removed when you parked the vehicle. Without it the van wouldn't start. The device was an aftermarket unit installed by the dealer. Our enquiry revealed that the service department assumed that it was no longer in use so they did not check that the interlock was there. I let our insurance company and the dealer duke out who was going to cover the additional repairs and towing charges. Eventually we got our van back but 17 years later it still bothers me. That was my first auto theft experience.

In the late 1990's Canada was experiencing around \$1,000,000,000 in auto thefts or roughly 600 cars stolen per 100,000 population and climbing. Various mechanical and electrical means were provided to dissuade or prevent theft. Due to the lack of reliable and comprehensive anti-theft systems the component of insurance premiums for theft was not dropping. At the same time in the United Kingdom there was private insurance led initiative to reduce the losses. Beyond the financial costs there were emotional and collateral damage to consumers who found their vehicle stolen, damaged and their lives interrupted. In one recent study of identity theft rings it was found that 1 in 3 incidents of identity theft could be tied to an auto theft.

In 1997 the Insurance Bureau of Canada (IBC) approached Underwriters Laboratories of Canada (now ULC Standards) to develop a National Standard of Canada to deal with this problem. ULC working with the IBC established the S300V committee with membership from a coalition of interested parties, including consumers, insurers, and law enforcement representatives, vehicle manufacturers, after-market security system suppliers and experts from the Underwriters Laboratories of Canada. The committee researched theft deterrent standards in other parts of the world, including the United Kingdom, Australia and Europe. All of this work culminated in the publication of the National Standard of Canada for Automobile Theft Deterrent Equipment and Systems: Electronic Immobilization CAN/ULC-S338-98, in May 1998. This standard is recognized by the Standards Council of Canada.

The Scope of the standard is:

1. Scope

1.1 These requirements cover electrical or electronic immobilization systems which are installed on passenger cars and light duty trucks with 12 v electrical systems.

1.2 Both OEM systems and non-OEM systems shall meet the requirements of this Standard.

1.3 Electronic immobilization systems shall be passively armed and once armed, they shall prevent the unauthorized movement of the vehicle under its own power.

1.4 As an optional protection mechanism, these requirements cover the addition of alarm warning functions to the core immobilization system in order to protect the vehicle's contents and to enhance the effectiveness of the electronic immobilization system.

1.5 An electronic immobilization system, as covered by these requirements, consists of one or more assemblies of electrical components designed to prohibit the starting or continued operation of the vehicle's engine by an unauthorized user.

1.6 A component of an electronic immobilization system or alarm warning system, such as attachment plug, siren, horn, switch, transponder, remote transmitter, wire, etc., shall comply with the requirements for that component, except that such requirements be modified if appropriate for the particular application.

1.7 Installation of the electronic immobilization system shall be in accordance with the manufacturer's instructions.

This standard covered immobilizers that were part of the original car and also those that were provided as aftermarket products. A year later ULC developed an Other Recognized Document (ORD) ULC/ORD-C275.1-99 Installation of Aftermarket Electronic Immobilizers. This was written to set out the requirements for an installer and the installation.

The IBC provided recognition of cars with immobilizers and of aftermarket units. Manufacturers provided evidence to IBC to substantiate the claim that the standards was met which were reviewed by IBC. IBC monitored the rates of theft and addressed any cases where the outcomes did not match the compliance expectations. Those who bought car with immobilizers experienced a significant drop in premiums.

Provinces and regulators took notice of the success of this standard as did other countries.

In September 2007 after an extensive consultation the Motor Vehicle Safety Act (re: electronic immobilizers) Canada's Motor Vehicle Safety Standards began to require that all new light-duty, non-emergency vehicles (cars, vans, light trucks and SUVs) be equipped with an electronic immobilization system that meets either the National Standard of Canada CAN/ULC-S338-98 or the UNECE/97 requirements with additional requirements to drive those systems towards a limited equivalence to CAN/ULC-S338-98. An area that was not addressed initially was aftermarket devices or vehicles being imported from the USA. A subsequent requirement was put in place that the imported vehicles had to have an immobilizer installed.

The Province of Manitoba was running into significant losses from vehicle theft, often related to joy riding. In 2005, Manitoba's Auto Theft Task Force established the Winnipeg Auto Theft Suppression Strategy focusing on three key areas: supervision of high-rate offenders, installation of electronic immobilizers in at-risk vehicles and working with young people and their families to reduce the number of new offenders (Linden and Munn-Venn, 2008).

What were the outcomes of the development of CAN/ULC-S338-98 and its utilization by the IBC, Transport Canada, Manitoba and others. In one word "staggering". Some key statistics:

- Between 1998 and 2003 the drop in theft claims was around 57%
- In 2007, police reported approximately 146,000 motor vehicle thefts, an average of about 400 stolen vehicles per day (at that time this equated to about \$1.2 billion a year in out-of-pocket costs including deductibles, added health care, court and legal costs).
- Transport Canada research suggests that immobilizers are effective in reducing the incidence of auto theft, particularly among youth (Transport Canada, 2007).
- None of the top-10 most frequently stolen vehicles in Canada for 2007 were equipped with immobilizers that met the national standard
- In 2007, the Winnipeg Police Service saw a 33% decrease in the number of completed vehicle thefts and a 32% increase in attempted thefts
- In 2010 the rate of auto theft was down to 321 per 100,000 population (a rate not seen before or since 1984)
- In the decade from 2001-2011, auto theft has fallen 40 per cent, suggesting that those safety features must be working

The benefit to consumer's and public safety of this standard is clear.

The most common reasons for auto theft are for profit and joy-riding. The for profit relates to dismantling the vehicle to sell valuable parts or re-exporting it to another country. For profit tends to be led by organized crime rings. Some sobering thoughts are then:

- Europol estimates that organized international vehicle trafficking is more profitable than prostitution or any other black market activity.
- Motor vehicle theft Rates are generally higher in western and northern Canada than in the eastern part of Canada.
- In 2007, about 4 in 10 stolen vehicles were not recovered by police, suggesting that a substantial proportion of motor vehicle thefts are related to organized crime.
- According to the CISC, organized crime groups involved in vehicle-related crime operate primarily out of Montréal and Toronto (CISC, 2008).
- Montréal not only has the highest number of motor vehicle thefts in the country, but also had the lowest recovery rate.
- Toronto recorded the second highest number of motor vehicle thefts, but had a recovery rate t closer to the national average. In Winnipeg, where "joy-riding" is known to be prevalent, the large majority (82%) of stolen motor vehicles were recovered by police

However, Success can spoil safety. Let's keep in mind that auto theft is an all-encompassing crime: joy riding, high speed police chases, drive-by shootings, carjackings, theft for profit (i.e. stealing and sending overseas, re-VINning, odometer rollbacks) and organized crime. As such we need to be vigilant recognizing that auto theft creates an environment of lawlessness, which is a threat to our community's well-being.

Some parties seem to think that the decrease in auto theft over the past years will continue and no more work is needed. On the contrary auto theft is based on basic supply and demand. Law enforcement officials across Canada suggest that the demand for stolen vehicles is growing, creating a shift in the curve so severe, thieves will invest in added technologies required to combat advanced automotive security systems.

As a standards developer ULC Standards know that standards should be updated and reviewed at least every 5 years. Since 2003 ULC Standards has been suggesting that CAN/ULC-S338-98 needs updating to line up all the new technologies and innovations coming on stream.

Now it is 2013 and vehicles have changed into networked, integrated products with significant risks of theft through these new features. In 2013 it was demonstrated that it possible to hack into a vehicle remotely using video game paddles. We now have automated (self-driving or parking) and Electric Vehicles (some refer to this as an appliance on wheels) coming on stream.

In the view of ULC Standards there is a pressing need to update the standard to stay aligned with technology and tools. The problem seems to be though that no one sees the need. Thefts are down and the universe is ok. By itself ULC Standards cannot update the standard and if it is not dealt with there will be no option but to withdraw the standard and the related installation ORD.

What can be done? Consider supporting the costs of updating the standard and taking part in this project. ULC Standards is a not for profit organization whose funding comes from the sale and development of standards. We have been developing standards for over 90 years.

About the author:

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