

[Notice](#)



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MOTOR VEHICLE SAFETY ACT

Regulations Amending the Motor Vehicle Safety Regulations (Bumpers)

P.C. 2008-1050 June 12, 2008

Whereas, pursuant to subsection 11(3) of the *Motor Vehicle Safety Act* ([see footnote a](#)), a copy of the proposed *Regulations Amending the Motor Vehicle Safety Regulations (Bumpers)*, substantially in the annexed form, was published in the *Canada Gazette*, Part I, on March 22, 2008 and a reasonable opportunity was afforded to interested persons to make representations to the Minister of Transport, Infrastructure and Communities with respect to the proposed Regulations;

Therefore, Her Excellency the Governor General in Council, on the recommendation of the Minister of Transport, Infrastructure and Communities, pursuant to subsection 11(1) of the *Motor Vehicle Safety Act* ([voir r00E9;f00E9;rence b](#)), hereby makes the annexed *Regulations Amending the Motor Vehicle Safety Regulations (Bumpers)*.

REGULATIONS AMENDING THE MOTOR VEHICLE SAFETY REGULATIONS (BUMPERS)

AMENDMENT

1. Section 215 of Schedule IV to the *Motor Vehicle Safety Regulations* ([see footnote 1](#)) is replaced by the following:

215. (1) A passenger car shall be equipped with bumpers that conform to either

(a) the requirements set out in paragraph 6, and the low-speed-impact test procedure set out in Annex 3, except for paragraph 4 of that Annex, of ECE Regulation No. 42 2014; *Uniform Provisions Concerning the Approval of Vehicles with regard to Their Front and Rear Protective Devices (Bumpers, etc.)*, in the version dated June 12, 2007, as amended after that date by any amendment in the 00 series

of amendments; or

(b) the requirements, conditions and test procedures set out in title 49, part 581 of the *Code of Federal Regulations* of the United States (revised as of October 1, 2006).

(2) Until August 31, 2009, a passenger car may conform either to the requirements of this section in its current version or as it read before the coming into force of these Regulations.

(3) A passenger car shall conform to the requirements of this section as of September 1, 2009.

COMING INTO FORCE

2. These Regulations come into force on the day on which they are published in the *Canada Gazette*, Part II.

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Regulations.)

Issue and objectives

This amendment to section 215 of Schedule IV of the *Motor Vehicle Safety Regulations* ([see footnote 2](#)) modifies the Canadian safety standard for bumpers via the incorporation by reference of the bumper safety standards of the United States and Europe. This has the effect of aligning the test speeds of the Canadian bumper safety standard with those of Europe and the United States and provides manufacturers the option of meeting the European safety requirements or the safety and no damage provisions of the United States. As a result of this amendment, there is one consistent set of globally regulated test speeds for the design of bumpers, which simplifies the task of designing bumpers for vehicles destined for the North American and European markets. This amendment also helps facilitate the introduction in Canada of the impending Global Technical Regulation for pedestrian safety, being developed under the auspices of the United Nations Economic Commission for Europe (UNECE).

In order to facilitate the transition to the new rule, manufacturers, during the consultation period, requested a transitional period during which time they will be allowed to follow either the regulation as it read before this amendment or the new requirements established by this amendment. A few manufacturers noted the need for this transitional period to allow them to redesign and restock parts in cases where a vehicle is equipped with a bumper system that would not meet the testing requirements of either the United States or the European safety standards. The *Motor Vehicle Safety Act* allows for the importation of vehicles sold at the retail level in the United States that are not in full compliance with Canadian safety standards provided the vehicles were originally manufactured to comply with all applicable Federal Safety Standards of the United States, and provided they can be modified to comply with Canadian safety

standards. Some manufacturers had indicated that the bumpers on certain vehicles manufactured for the United States could not be modified to meet Canadian requirements. This amendment will therefore allow vehicles manufactured for the United States that were deemed inadmissible due to differing bumper requirements to become admissible since bumper modifications will no longer be required. Until August 31, 2009, manufacturers will be allowed to meet either the bumper testing requirements set out as it read before this amendment or the new requirements established by this amendment. As of September 1, 2009, manufactures will be required to conform to the new requirements in all cases.

Description and rationale

Canada and the United States introduced safety standards for bumpers in the early 1970s. When the Canadian and the United States safety standards were originally introduced, they were harmonized with a test speed of 5 mph (8 km/h) for front and rear impacts and 3 mph (4.8 km/h) for corner impact tests. However, in 1979, the United States added more stringent requirements that included cosmetic damage criteria, while maintaining the original test speeds and safety components damage protection requirements. In 1982, the United States reduced the test speeds to 2.5 mph (4 km/h) for front and rear impacts and 1.5 mph (2.4 km/h) for corner impacts, and maintained their cosmetic and safety damage requirements.

In 1983, when the Canadian government proposed an amendment to harmonize the test speeds with those of the United States (i.e., 4 and 2.4 km/h), many Canadian stakeholders, such as the public, provincial and territorial governments, media and the insurance industry, were against the proposed test speed reduction. As a result the harmonization of test speeds was not pursued; thus for the past 26 years Canada has had a unique higher speed bumper test requirement for passenger cars.

These higher test speeds have resulted in some vehicle models not being available to Canadian consumers. In addition, there have been some vehicles sold at the retail level in the United States that have been inadmissible for importation into Canada as they have not met the Canadian bumper requirements.

Manufacturers are presently more concerned with the ability to design vehicles capable of meeting both the unique higher Canadian test speeds and future pedestrian safety requirements that are being developed internationally, rather than the limitation of vehicle models available on the Canadian market. The global technical regulation for pedestrian safety is aimed at reducing pedestrian fatalities by requiring that the front upper portion of vehicles be designed to reduce head contact forces when a pedestrian strikes the vehicle. This is accomplished by providing space between the vehicle's exterior parts, such as the hood and upper fenders, and the solid structure of the vehicle, such as the motor or frame. In addition to reducing head injuries, the Global Technical Regulation on pedestrian safety will require that bumpers be designed to reduce lower leg injuries.

Most manufacturers have expressed the concern that a conflict exists in meeting the requirements of the three existing safety standards, ECE regulation 42, Canadian safety standard 215, and title 49, part 581 of the *Code of Federal Regulations* of the United States. As the European and Canadian requirements are aimed at improving safety, the intention at the time of introduction of the requirements was to protect the safety equipment of the vehicle, such as the lights, from damage in a low speed collision. The intention of the current United States bumper standard is to prevent or reduce physical damage to the front and rear of passenger cars in low-speed collisions, while protecting the hood, trunk, grill, fuel, exhaust, and cooling systems as well as safety related equipment such as parking lights, headlamps and tail lamps in low speed collisions. Manufacturers have noted that from a design standpoint, there is a conflict between meeting the no damage requirement of the United States, the higher test speeds in Canada with no damage to the safety systems and the need for bumpers to be designed to meet the requirements of the impending global technical regulation for pedestrian safety. Manufacturers have indicated that it will not be possible to meet all three requirements at once. Further, most manufacturers have suggested that they would be able to meet the United States lower speed and no damage requirements and the pedestrian safety requirements with one design.

This amendment will have a positive impact on international trade, as the Canadian requirement for bumper testing is the same as the requirements in Europe and the United States. This amendment will assist Canada with its obligation under the Global Agreement, made under the auspices of the UNECE. Canada's commitment to review the Canadian bumper test speeds was noted in the summary document of the Global Technical Regulation working group on pedestrian safety that is available at the following site <http://www.unece.org/trans/doc/2006/wp29grsp/ps-186e.doc>.

It is important to note that the design of bumper systems and the percentage of passenger cars sold in Canada have changed significantly since the introduction of the bumper requirement in the early 1970's. In 1970 almost 83% of the vehicles sold were classified as passenger cars. Today that percentage has dropped to less than 52% because of the increasing consumer demand for trucks and multi-purpose passenger vehicles, which are not subject to the bumper requirements. In the intervening years, vehicle designs have also significantly changed. Vehicle designs in the 1970's frequently included metal bumpers with inexpensive, easy replaceable, sealed beam headlamps. In comparison current designs usually include hidden bumper protection systems with moulded plastic covers and integral unique headlamps designs.

In the 1970's the government estimated that there would be a very small reduction in fatalities and injuries as a result of the benefit that people no longer continue to drive a vehicle with damaged non-functioning lights following a small collision. The intention was for the safety standard to result in vehicle designs where lighting and similar safety systems would be protected in a low speed collision so that they would remain functional should the vehicle owner continue to drive a damaged vehicle. Today, several factors may alter this conclusion, such as the significant increase in sales of trucks and

multi-purpose passenger vehicles (an increase of almost 500%), and the significant design changes in bumpers and lighting systems in the past 35 years. It is now impossible to determine if the unique Canadian test speeds provide any safety benefit. As there are over 370 pedestrian fatalities per year (a significant portion of the 200,900 fatalities per year on Canadian roads), it is proposed that it is time to refocus road safety efforts away from higher test speeds aimed to protect the vehicle safety systems, and to begin to facilitate future pedestrian safety designs.

Pedestrian fatalities have remained stagnant since 2001, despite Canada's National Road Safety Vision 2010 target of a 30% reduction for vulnerable road users. Further information is available in the Road Safety Vision Mid-Term Review report, viewable at the Canadian Council of Motor Transport Administrators Web site www.ccmta.ca and in the Canadian Motor Vehicle Traffic Collision Statistics, viewable at www.tc.gc.ca/roadsafety.

It is understood that making the front of a vehicle softer to protect pedestrians could result in some additional repair costs, especially considering that most low speed collisions involve rear-ending other vehicles such as in bumper-to-bumper traffic. This would have an impact on the insurance industry, and in turn the consumer. In 2007, the United States based Insurance Institute for Highway Safety (IIHS), released a new (non-regulatory) bumper test protocol to better mimic the performance of a car bumper and to assess under- and override during vehicle-to-vehicle low speed crashes for all classes of light duty vehicles, with the focus being on damageability and cost of repairs. The impact test speeds for front and rear full-width impacts is 9.6 km/h and the corner impacts are tested at 4.8 km/h.

It is expected that this amendment will better serve a greater proportion of the public, as it facilitates the enhancement in safety for pedestrians without compromising the safety of passenger car occupants. As the IIHS and the European insurance industry widely publicize the results of their test programs, Canadian consumers will be able to take advantage of this consumer information when purchasing a new vehicle.

Under the Government's Strategic Environmental Assessment policy, a preliminary evaluation of the possible effects of the amendment was carried out. It was determined that the amendments would have no negative impact on the environment. On the contrary, they may have a slight benefit in terms of fuel economy due to the reported reduction in vehicle mass as a result of the lighter bumper systems.

Consultation

The intention to review the bumper requirements was announced in the Department of Transport's Regulatory Plan, which is widely distributed to interested stakeholders, either directly or through various associations on a quarterly basis. A Notice of Intent was also published in the *Canada Gazette*, Part I on October 13, 2007, requesting input from stakeholders regarding various options to amend the Canadian bumper requirements. This Notice provided until

December 31, 2007, for stakeholders to comment on potential solutions to resolve the issue of the unique Canadian bumper test requirement. Six different options were identified in the Notice. Comments were received from three different stakeholder groups, namely Canadian consumers, vehicle manufacturers and their associations, and vehicle insurance organizations.

Many Canadian consumers wrote expressing their desire for the Canadian government to harmonize the test speeds with those of the United States, indicating that they did not see any safety benefit to the higher Canadian test speeds. The current unique Canadian requirements have resulted in some vehicle models from the United States being inadmissible for importation into Canada. Many Canadian consumers noted that this restriction not only limits their choice but also increases the price of some specialized vehicle models that are sold in limited numbers in Canada. In other instances, consumers noted a concern with what they perceive to be an excessive cost to modify conditionally admissible vehicles to satisfy the Canadian requirements. This occurs in situations where United States bumper systems are modified to meet the Canadian bumper requirements for the purpose of importation. This modification can often cost several thousands of dollars. One consumer group included a petition requesting the harmonization of test speeds, which was supported by about 100,400 Canadians.

Given the strength of the Canadian dollar in late 2007, the importation of vehicles from the United States was at an all time high and the non-harmonization of bumper test speeds resulted in additional concerns with vehicles being blocked from importation. The Press and many Canadian consumers indicated their expectation to be able to purchase the same vehicle in the United States as they can in Canada at a similar price. Almost 190,000 vehicles of all classes, less than 15 years old, were imported from the United States in 2007.

Manufacturers indicated that harmonizing the test speeds will reduce the design, testing, certification and manufacturing costs, reduce vehicle mass, improve fuel economy as a result of the reduction in mass and improvement in aerodynamics, and will increase vehicle model availability in Canada.

Two negative representations were received following the publication of the Notice, from the Insurance Corporation of British Columbia (ICBC) and from the IIHS. Both of these submissions included the request for the Canadian government to maintain the higher test speeds. They also noted in qualitative terms that insurance costs would increase if the Canadian test speeds were aligned with those of the United States and Europe. The IIHS also noted that the bumper designs of many vehicles manufactured for the United States are significantly influenced by the current Canadian requirements. As a result, for models that are currently sold in both countries, United States customers often automatically benefit from the Canadian standard's higher level of protection since manufacturers tend to build to one design, which encompasses both national requirements.

Both representations noted the existence of a voluntary bumper test

program developed by the Research Council for Automotive Repairs (RCAR) and that many current model vehicles do not perform well when tested under this program which requires the bumper system to be tested at a speed between 9.5 to 10.5 km/h. Both the ICBC and IIHS noted concern that the design of bumpers may degrade and vehicles may perform worse in the RCAR tests if the higher Canadian test speeds were dropped. They suggested that the Canadian bumper regulation should be expanded to include requirements for trucks and multi-purpose passenger vehicles instead of reducing the test speeds for passenger cars.

Pre-Publication Comments

During the 30-day pre-publication period, which began after March 22, 2008, over 35 comments and requests for clarification were received. The comments received during the pre-publication of the proposed amendment, were similar to those received following the publication of the Notice of Intent.

The Canadian Inquiry Point of the World Trade Organization Committee on Technical Barriers to Trade, which is co-ordinated by the Standards Council of Canada, received a request from the European Union to extend the comment period. The European Union requested that the comment period be extended to 75 days. The pre-published amendment was proposed on the grounds that manufacturers would be allowed to follow either of the two world requirements, and was based on the Notice of Intent published on October 13, 2007, thus giving ample time to receive stakeholders' views within the period of 30 days.

Twenty-four Canadian consumers wrote expressing their desire for the harmonization of bumper testing requirements. Many noted that the current unique Canadian requirements have resulted in some vehicle models from the United States being inadmissible for importation into Canada. Many Canadian consumers again noted that this restriction not only limits their choice but also increases the Canadian price of vehicles by adding a cost to modify conditionally admissible vehicles to satisfy the Canadian requirements.

Manufacturers and their representative organizations are supportive of this amendment with many noting that the amendment will improve the choice of vehicles available to Canadians, reduce the mass of vehicles and thus provide environmental benefits, all with no reduction in safety. One association of manufacturers suggested that the option to certify vehicles to the European requirements should be eliminated as Canadian vehicles meeting this requirement will not be allowed to be imported into the United States. Manufacturers also requested that they be allowed, on an optional basis, to follow the requirements of the bumper standard as it read before this amendment for a period of time to allow them to redesign and restock parts in cases where a vehicle is equipped with a bumper system that would not meet the testing requirements of either the United States or the European regulations.

The request by manufacturers to eliminate the European option has not been retained, as it would result in the need for a second pre-

publication of the proposed amendment with a longer consultation period, which would be required due to the likelihood that some manufacturers may change their support if this alternative was dropped. It should be noted that the government had originally proposed the European option to permit greater flexibility and facilitate multi-lateral harmonization and trade.

In response to the manufacturers' request, this amendment allows manufacturers, on an optional basis, to follow the requirements as they read before this amendment until August 31, 2009, on the basis that the additional time is needed to redesign or restock parts in cases where a vehicle would be equipped with a unique bumper, which would not meet the testing requirements of either the United States or Europe.

Two manufacturers commented that the proposed amendment did not clearly represent the issue of the conflict in design needs between the protection of the vehicle and pedestrians. Both manufacturers were of the opinion that the RIAS statement did not reflect their views in stating that manufacturers have suggested that they would be able to meet the United States lower speed and no damage requirements and the pedestrian safety requirements with one design. It is the manufacturers' opinion that the lower leg requirements of the pedestrian safety global technical regulation for pedestrian safety are in technical conflict with the requirements of any of the existing world bumper requirements. One comment noted that bumpers designed to improve pedestrian safety requirements would require a lower density foam than is required to meet the current bumper regulation of the United States, thus conforming to both requirements with one design would result in an increase in vehicle length and mass. This change in vehicle dimensions would result in the need for the entire front of the vehicle to be redesigned, due to the demands of the knee-bending limit angle of the pedestrian safety test. This conflict in design between bumper/vehicle and pedestrian protection has been recognized in Europe and thus countries wishing to apply the pedestrian protection requirements do not apply the European bumper protection requirements.

While no other manufacturer provided a similar level of detail with their concern, many manufacturers requested that Canada not simultaneously apply both the bumper and pedestrian protection requirements. Instead, manufacturers requested that if Canada is to consider adopting the lower leg pedestrian safety requirements they should be optional or, alternatively, the bumper protection requirements should be withdrawn entirely. Stakeholders would have ample opportunity to comment if Canada proposes new requirements for pedestrian safety.

The IIHS expressed disappointment with the proposal to amend the bumper requirements noting that the less stringent standard is based on unsubstantiated concerns regarding a trade-off between bumper damage and pedestrian protection. They suggested that effectively reducing the speeds would lead to an increase in the number of insurance claims and higher insurance costs for car owners while providing questionable benefits to pedestrians. The IIHS again noted that they were unaware of any scientific studies indicating a trade-off

between the effective protection from bumper damage in low speed collisions and protecting pedestrians. The IIHS identified one specific model that did well on both criteria. They noted that in 1982 when the United States reduced the speed of their bumper standard that insurance claim rates for vehicles whose designs changed under the less stringent standard increased by up to 24%. They also noted that while it may be true that a few niche vehicles, mostly exotic sports cars, are not available in Canada because of the unique Canadian bumper standard, the reality is that nearly all mainstream vehicles are designed to meet both United States and Canadian standards, and thus the expected economic benefit of harmonization would be unlikely to materialize. Finally they noted that as the RCAR test is required to establish insurance rates in Europe, but is not mentioned in the Canadian requirements, this would continue to lead to radically different bumper designs between Europe and North America, regardless of Canadian actions.

One consumer also disagreed with the proposed amendment, suggesting that the repair cost of bumpers will be substantially higher following the amendment, especially given the cold Canadian winters. The consumer further noted that the already fragile bumpers on new vehicles will become even more fragile and given the colder Canadian operating conditions will result in a dramatic escalation in bumper repair costs when vehicles are designed to the less stringent requirements.

It should be noted that the National Highway Traffic Safety Administration (NHTSA) of the United States completed an evaluation of bumper systems, which did not demonstrate a clear link between test speeds and damage. In 1987, the NHTSA carried out an evaluation of the bumper standard, [\(see footnote 3\)](#) and concluded that the costs to consumers did not change as a result of the reduction in the test speeds from 8 to 4 km/h and 4.8 to 2.4 km/h. Further it concluded that the net effect, over a car's 10-year life, is a small increase in repair costs, which is offset by a reduction in the cost of the bumpers. Finally, it noted that the change in the bumper standard did not compromise the protection of safety-related parts.

Given the concern regarding the importation of vehicles, and the desire to move towards pedestrian protection and given that the two negative comments received did not provide any quantifiable evidence that safety would be compromised if the test speeds were harmonized with those of the United States and Europe, the Government has decided to amend the bumper requirements. This amendment introduces a new bumper requirement, which harmonizes and allows manufacturers the choice of complying with the existing bumper requirements of Europe and the United States. This amendment, for the first time in 26 years, eliminates the barrier to the importation of passenger cars, which do not have bumpers that meet the Canadian bumper safety standard. With regard to insurance and claim costs, the Government encourages the insurance industry to promote more widely to policyholders the impact of weakened bumpers on costs to consumers and to make people aware of the available consumer information on bumper testing. The Government also encourages consumers to avail themselves of information available from the insurance companies on the damageability ratings

of various vehicle models. The marketplace can thereby help determine what meets the needs of individual Canadians.

Implementation, enforcement, and service standards

Motor vehicle manufacturers and importers are responsible for ensuring that their products conform to the requirements of the *Motor Vehicle Safety Regulations*. The Department of Transport monitors self-certification programs of manufacturers and importers by reviewing their test documentation, inspecting vehicles, and testing vehicles obtained in the open market. In addition, when a defect in a vehicle or equipment is identified, the manufacturer or importer must issue a Notice of Defect to the owners and to the Minister of Transport. If a vehicle does not comply with a Canadian safety standard, the manufacturer or importer is liable to prosecution and, if found guilty, may be fined as prescribed in the *Motor Vehicle Safety Act*.

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NOTICE:

The format of the electronic version of this issue of the *Canada Gazette* was modified in order to be compatible with hypertext language (HTML). Its content is very similar except for the footnotes, the symbols and the tables.





[Important notice](#)

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