


[Notice](#)

 142, No. 31 — August 2, 2008

Regulations Amending the Motor Vehicle Safety Regulations (sections 203, 204, 212 and 219)

Statutory authority

Motor Vehicle Safety Act

Sponsoring department

Department of Transport

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Regulations.)

Issue and objectives

The proposed amendment to Schedule IV of the *Motor Vehicle Safety Regulations* ([see footnote 1](#)) (MVSR) would clarify and update the requirements of four Canadian safety standards regarding occupant protection, namely standards 203 (Driver Impact Protection), 204 (Steering Column Rearward Displacement), 212 (Windshield Mounting) and 219 (Windshield Zone Intrusion). In addition, this amendment will further align these Canadian requirements with those of the United States.

Description and rationale

Canadian safety standard 203

Canadian safety standard 203 specifies requirements for steering control systems to minimize chest, neck and facial injuries to the driver as a result of an impact. It was developed and enacted in 1971 to improve occupant protection and encourage the installation of collapsible, energy-absorbing steering wheel assembly designs.

The current requirements exempt vehicles from having to meet the performance requirements of Canadian safety standard 203 if the vehicle meets the frontal crash requirements of Canadian safety standard 208 by means other than seat belt assemblies. Although this portion of the regulatory text matches the regulatory text of the United States, it must be clarified that while air bags and unbelted testing are mandatory in the United States, Canada does not require vehicles to be equipped with airbags nor does it require unbelted testing. Rather, Canada specifies a performance requirement for the occupant retention system where seat belt use is implicit and required. Since seat belts are required for Canadian safety standard 208, the statement 201C;by means other than seat belt assemblies201D; found in Canadian safety standard 203 is confusing. The text would be amended to say that any vehicle which has been tested and which meets the Canadian crash protection requirements of Canadian safety standard 208 is exempt from meeting the steering control test procedure and requirements of Canadian safety standard 203.

Some minor differences exist between the American and Canadian standards with respect to the values of the body block impact test speed and load. The Canadian requirement uses 24.1 km/h instead of 24 km/h for the speed, and 11.1 kN instead of 11 120 N for the load. For purposes of harmonization, the proposed amendment would use the same values as the United States; 24 km/h and 11 120 N respectively.

Finally, the proposed amendment would better align the requirement with respect to the entanglement of jewellery with the steering control system with that of the corresponding United States standard.

Canadian safety standard 204

Canadian safety standard 204 currently specifies requirements limiting the rearward displacement of the steering column into the passenger compartment to reduce the likelihood of chest, neck and head injuries to the driver during a frontal collision.

The method of measurement currently specified in Canadian safety standard 204 does not include the dynamic displacement of the steering column during the crash test.

Currently, there is a lack of precision in Canadian safety standard 204 in the description of the measurement of the steering column displacement required during the 48 km/h crash test into a fixed collision barrier. A manufacturer could legally make this measurement using only a comparison of the pre-crash and post-crash

positions of the steering wheel centre. This method of measurement ignores the dynamic displacement of the steering column, which could have a higher value during the crash than in its post-crash position, potentially injuring the occupant in a collision. Therefore, the proposed amendment would align the standard with the corresponding standard of the United States, which specifies that the amount of displacement of the upper end of the steering column and shaft shall represent its maximum dynamic movement during the crash test.

Contrary to the United States, the Canadian safety standard 204 allows for the forward longitudinal velocity of the crash test into a fixed collision barrier to be between 48 and 53 km/h. This tolerance was originally put in place when it was difficult to accurately control a vehicle's impact speed in a barrier crash. However, as technology improved, the United States felt this tolerance was no longer required and subsequently removed it from its regulation in 1987 (52CFR44893). The proposed amendment would repeal this tolerance from Canadian safety standard 204 to align with the United States' requirement and to avoid redundancy with the test requirements of Canadian safety standard 208.

In addition, the current text that exempts certain vehicles from the application of the Canadian safety standard contains a minor error of an administrative nature. It currently exempts vehicles if they have a gross vehicle weight rating greater than 4 536 kg or an unloaded vehicle mass of 2 500 kg. The administrative error is the word "or". The equivalent regulation in the United States uses the word "and"; as do other Canadian safety standards. To ensure consistency, the proposed amendment would make it clear that the gross vehicle weight rating and unloaded vehicle mass requirements are cumulative.

The conversion from imperial units to metric units caused a 500 kg differential in the vehicle mass used in this Canadian standard and the corresponding U.S. standard. The proposed amendment would correct this inconsistency by using the same unloaded vehicle mass (i.e. 2 495 kg) in the description of vehicles referred to in Canadian safety standard 204. Using this vehicle mass would also be consistent with Canadian safety standards 208, 210.1 and 210.2.

Canadian safety standards 212 and 219

The purpose of Canadian safety standard 212 is to reduce crash injuries and fatalities by providing for retention of the vehicle windshield during a crash and the purpose of Canadian safety standard 219 is to reduce crash injuries and fatalities by preventing the intrusion of any part of the vehicle into the occupant compartment in the event of a frontal collision.

Most Canadian safety standards only use metric units of measurement for items such as mass, speed, length, etc. Canadian safety standards 212 and 219 express these measurements in metric units with the imperial equivalent in brackets for reference. The proposed amendment would delete all the imperial units of measurement in these Canadian safety standards since they are included for reference

only. Further, Canadian safety standards 212 and 219 do not apply to any vehicle with a gross vehicle weight rating greater than 4000;536 kg. The proposed amendment would clarify that these standards do not apply to a truck, a multi-purpose passenger vehicle or a bus with a gross vehicle weight rating greater than 4 536 kg.

Canadian safety standards 204, 212 and 219

Canadian safety standards 204, 208, 212 and 219 all have vehicle loading and set up requirements specified within each standard as part of their testing requirement. In addition all these tests are required to be conducted at the same speed of 48 km/h into a fixed barrier. To reduce costs, manufacturers perform the actual tests of Canadian safety standards 204, 212 and 219 at the same time as performing the Canadian safety standard 208 crash test requirements. To ensure that it is clear that all these tests may be conducted at the same time and to reflect current practices, it is proposed that Canadian safety standards 204, 212 and 219 reference to the speed and set up requirements of Canadian safety standard 208 rather than having specific requirements in each Canadian safety standard.

Canadian safety standard 219

Within Canadian safety standard 219, there are some inconsistencies in the wording used. Although the text matches the corresponding United States standard, and there have been no concerns expressed to the Department of Transport, it is necessary to modify the wording to ensure clarity.

The first concern is that there is no consistency when the term 201C;windshield201D; or the term 201C;windshield glazing201D; is used. The windshield glazing can be interpreted as the clear glass that an occupant looks through. The term 201C;windshield201D; may be interpreted the same way or may be interpreted as the entire windshield system, including the rubber moulding around the windshield glazing and the adhesive used to bond the windshield glazing to the vehicle. To avoid misinterpretation, the proposed amendment would change all references of 201C;windshield201D; to 201C;windshield glazing201D;.

The second concern relates to Figure 1. The text of Canadian safety standard 219 refers to Figure 1 for clarification; however, the current wording of the text does not always match the wording used in Figure 1. To avoid misinterpretation, the proposed amendment would ensure that the terms used in Figure 1 match those used in the text of Canadian safety standard 219. In addition, the arrow for the 201C;Horizontal extension beyond outermost contactable point201D; points to the incorrect location. The proposed amendment would point this wording to the correct location.

Consultation

The Department of Transport informs the automotive industry, public safety organizations, and the general public when changes are planned to the MVSR. This gives them the opportunity to comment on these changes by letter or email. The Department also consults

regularly, in face-to-face meetings or teleconferences, with the automotive industry, public safety organizations, the provinces and the territories.

In addition, the Department meets regularly with the federal authorities of other countries. Given that harmonized regulations are key to trade and to a competitive Canadian automotive industry, the Department and the United States Department of Transportation hold semi-annual meetings to discuss problems of mutual interest and planned regulatory changes. In addition, departmental officials participate in and support the development of Global Technical Regulations, which are developed by the World Forum for the Harmonization of Vehicle Regulations under the direction of the United Nations Economic Commission for Europe.

The Department's intention to align these four Canadian safety standards was announced in the Regulatory Plan of the Road Safety and Motor Vehicle Regulation Directorate. The Regulatory Plan outlines all contemplated changes to Canada's motor vehicle safety requirements and tracks initiatives as they are developed, published in the *Canada Gazette*, and as the new regulations come into force. On a quarterly basis, the Regulatory Plan is distributed to virtually all members of the automotive industry, either directly or through various associations.

These changes have been discussed at the quarterly meetings with the industry members, the last two occurring in November 2007 and January 2008. To date one comment has been brought forward. Ford has recently commented to the Department that Canadian safety standard 203 was not aligned with the equivalent United States safety standard in regards to the vehicle exemptions. The United States exempts vehicles from meeting the entire equivalent safety standard if a vehicle meets the crash requirements of the United States safety standard 208. The Canadian safety standard 203 allows for the same exemption; however, it still requires that vehicle steering wheels be designed so as not to catch jewellery (such as watches and rings) and clothing during normal driving manoeuvres.

The department believes that ensuring a steering control system does not catch a driver's jewellery or clothing is (beyond the fact that it is not a performance requirement and requires no unique Canadian tests) not a design restrictive requirement. This requirement is not meant to protect a driver in a crash. Rather, it is a safety feature to ensure a driver can maintain control of a vehicle during normal driving manoeuvres. Therefore, no changes have been proposed to this requirement.

Implementation, enforcement and service standards

Motor vehicle manufacturers and importers are responsible for ensuring that their products conform to the requirements of the MVSR. 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, Infrastructure and Communities. 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*.

Contact

Anthony Jaz
Senior Regulatory Development Officer
Road Safety and Motor Vehicle Regulation Directorate
Transport Canada
275 Slater Street, 17th Floor
Ottawa, Ontario
K1A 0N5
Email: jaza@tc.gc.ca

Please note: It is important that your submission be provided to the attention of the person noted above before the closing date. Submissions not sent directly to the person noted may not be considered as part of this regulatory proposal. Individual responses to your submission will not be sent. The *Canada Gazette*, Part II, will contain any changes that are made, along with a summary of the relevant comments received. Please indicate in your submission if you do not wish to be identified or if you do not wish to have your comments published in the *Canada Gazette*, Part II.

PROPOSED REGULATORY TEXT

Notice is hereby given, pursuant to subsection 11(3) of the *Motor Vehicle Safety Act* ([see footnote a](#)), that the Governor in Council, pursuant to subsection 11(1) of that Act, proposes to make the annexed *Regulations Amending the Motor Vehicle Safety Regulations* (sections 203, 204, 212 and 219).

Interested persons may make representations with respect to the proposed Regulations to the Minister of Transport, Infrastructure and Communities within 75 days after the date of publication of this notice. All such representations must be in writing and cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to Anthony Jaz, Senior Regulatory Development Engineer, Road Safety and Motor Vehicle Regulation Directorate, Department of Transport, 17th Floor, 275 Slater Street, Ottawa, Ontario K1A 0N5 (e-mail: jaza@tc.gc.ca).

Ottawa, July 28, 2008

MARY PICHETTE
Assistant Clerk of the Privy Council

REGULATIONS AMENDING THE MOTOR VEHICLE SAFETY REGULATIONS (SECTIONS 203, 204, 212 AND 219)

AMENDMENTS

1. The heading before section 203 and sections 203 and 204 of

Schedule IV to the *Motor Vehicle Safety Regulations*
(see footnote 2) are replaced by the following:

Driver Impact Protection and Steering Control System

203. (1) Subsections (2) and (3) do not apply to the following vehicles:

(a) a walk-in van;

(b) a truck, multi-purpose passenger vehicle or bus with a GVWR greater than 4 536 kg; or

(c) a vehicle that complies with the requirements set out in subsections 208(22) and (23).

(2) The steering control system of a vehicle shall be tested in accordance with the test procedure described in SAE Recommended Practice J944, *Steering Control System 2014; Passenger Car 2014; Laboratory Test Procedure* (June 1980).

(3) The following requirements with respect to the steering control system shall be met during the test referred to in subsection (2):

(a) the system shall be impacted by a body block at a relative velocity of 24 km/h; and

(b) the impact force developed on the chest of the body block and transmitted to the system shall not exceed 1100A0;120 N, except for intervals with a cumulative duration of not more than 3 ms.

(4) The steering control system of a vehicle shall be constructed in such a manner that no component or attachment 2014; including any horn actuating mechanism 2014; is capable, during normal driving manoeuvres, of catching the driver2019;s clothing or jewellery such as a watch, ring or bracelet, other than any loosely attached or dangling members.

204. (1) This section does not apply to the following vehicles:

(a) a walk-in van; or

(b) a truck, multi-purpose passenger vehicle or bus

(i) with a GVWR greater than 4 536 kg, and

(ii) an unloaded vehicle mass greater than 2 495 kg.

(2) A vehicle to which this section applies shall be tested in accordance with the requirements set out in subsection 208(23).

(3) During the test referred to in subsection (2), the upper end of the steering column and steering shaft shall not be displaced more than 127 mm in a horizontal rearward direction parallel to the longitudinal axis of the vehicle in relation to an undisturbed point on the vehicle. The displacement shall be equivalent to the maximum dynamic

movement of the upper end of the steering column and steering shaft during the test.

2. (1) Paragraph 212(1)(a) of Schedule IV to the Regulations is replaced by the following:

(a) a truck, multi-purpose passenger vehicle or bus with a GVWR greater than 4 536 kg; or

(2) Subsections 212(2) to (8) of Schedule IV to the Regulations are replaced by the following:

(2) A vehicle to which this section applies shall be tested in accordance with the requirements set out in subsection 208(23).

(3) During the test referred to in subsection (2), the vehicle shall retain not less than

(a) 50 per cent of the windshield periphery on each side of the vehicle longitudinal centre line, if equipped with an air bag at a front designated seating position; and

(b) 75 per cent of the windshield periphery, if not equipped with an air bag at a front designated seating position.

(4) The test referred to in subsection (2) shall be conducted on the windshield mounting material and all vehicle components in direct contact with the mounting material at a temperature that is not less than 2212;900B0;C and not more than 4300B0;C.

3. (1) Paragraph 219(2)(a) of Schedule IV to the Regulations is replaced by the following:

(a) a truck, multi-purpose passenger vehicle or bus with a GVWR greater than 4 536 kg; or

(2) Subsections 219(3) to (9) of Schedule IV to the Regulations are replaced by the following:

(3) A vehicle to which this section applies shall be tested in accordance with the requirements set out in subsection 208(23).

(4) During the test referred to in subsection (3), there shall be no penetration, other than the penetration of windshield mouldings or other components designed to be normally in contact with the windshield glazing,

(a) of the windshield protected zone template to any depth in excess of 6 mm by any part of the vehicle outside the occupant compartment; or

(b) of the inner surface of the portion of the windshield glazing that is within the DLO below the windshield protected zone by any part of the vehicle outside the occupant compartment.

(5) The lower boundary of the windshield protected zone displayed in

the figure to this section shall be determined as follows:

(a) place a 165 mm diameter rigid sphere having a mass of 6.8 kg in such a position that it simultaneously contacts the inner surface of the windshield glazing and the surface of the instrument panel, including any padding, and if the positioning of the sphere is obstructed by steering controls or other accessories or equipment, the accessories or equipment may be removed while the sphere is being positioned;

(b) draw the locus of points on the inner surface of the windshield glazing contacted by the sphere across the width of the instrument panel, and, from the outermost of those points of contact, extend the locus line horizontally to the edges of the glazing material;

(c) draw a line on the inner surface of the windshield glazing below and at a distance of 13 mm from the locus line drawn in accordance with paragraph (b); and

(d) project the line drawn in accordance with paragraph (c) longitudinally on the outer surface of the windshield glazing and the resulting line is the lower boundary of the windshield protected zone.

(6) The windshield protected zone displayed in the figure to this section is the space enclosed by

(a) the outer surface of the windshield glazing;

(b) the locus of points 76 mm outward along perpendiculars drawn to each point on the outer surface of the windshield glazing; and

(c) the locus of lines forming a 45-degree angle with the outer surface of the windshield glazing at each point along the top and side edges of the outer surface of the windshield glazing and the lower boundary of the windshield protected zone determined by subsection (5) in the plane perpendicular to the edge at that point.

(7) For the purposes of subsection (6), 201C;outer surface of the windshield glazing201D; means the outer surface of the windshield glazing as configured before the test referred to in subsection (3).

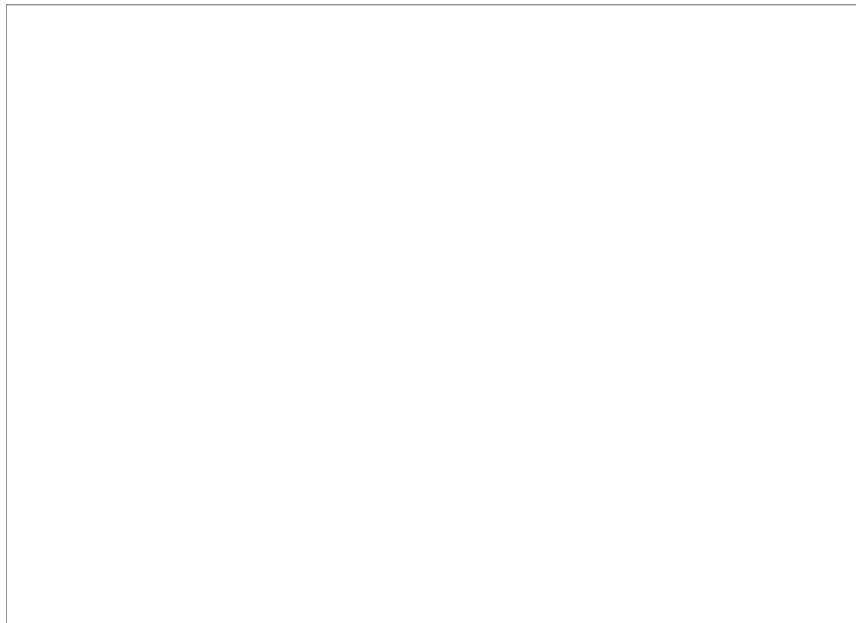


Figure 2014; Windshield Protected Zone

COMING INTO FORCE

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

[31-1-o]


[Footnote 1](#)

C.R.C., c. 1038

[Footnote a](#)

S.C. 1993, c. 16

[Footnote 2](#)

C.R.C., c. 1038 

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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.



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