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MOTOR VEHICLE SAFETY ACT

**Regulations Amending the Motor Vehicle Safety Regulations (Seat Belt Anchorages, User-ready Tether Anchorages, Lower Universal Anchorage Systems, Built-in Child Restraint Systems and Built-in Booster Cushions) and the Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations**

P.C. 2008-542 March 11, 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 (Seat Belt Anchorages, User-ready Tether Anchorages, Lower Universal Anchorage Systems, Built-in Child Restraint Systems and Built-in Booster Cushions) and the Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations*, substantially in the form set out in the annexed Regulations, was published in the *Canada Gazette*, Part I, on November 18, 2006, and a reasonable opportunity was thereby 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 section 5 [\(see footnote b\)](#) and subsection 11(1) of the *Motor Vehicle Safety Act* [\(see footnote c\)](#), hereby makes the annexed *Regulations Amending the Motor Vehicle Safety Regulations (Seat Belt Anchorages, User-ready Tether Anchorages, Lower Universal Anchorage Systems, Built-in Child Restraint Systems and Built-in Booster Cushions)* and the *Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations*.

**REGULATIONS AMENDING THE MOTOR VEHICLE  
SAFETY REGULATIONS (SEAT BELT ANCHORAGES,  
USER-READY TETHER ANCHORAGES, LOWER  
UNIVERSAL ANCHORAGE SYSTEMS, BUILT-IN CHILD  
RESTRAINT SYSTEMS AND BUILT-IN BOOSTER  
CUSHIONS) AND THE MOTOR VEHICLE RESTRAINT  
SYSTEMS AND BOOSTER CUSHIONS SAFETY  
REGULATIONS**

**AMENDMENTS**

**Motor Vehicle Safety Regulations**

**1. (1) The definitions “built-in booster cushion”, “open-body type vehicle”, “seat belt anchorage” and “seating reference point” in subsection 2(1) of the *Motor Vehicle Safety Regulations* [\(see footnote 1\)](#) are replaced by the following:**

“built-in booster cushion” means a device that is designed as an integral part of a vehicle seating system, for the purpose of seating in an elevated position a person who weighs at least 18 kg (40 pounds), in order to adapt an adult seat belt assembly of the motor vehicle to the person; (*coussin d’appoint intégré*)

“open-body type vehicle” means a vehicle that has no top over the occupant compartment or that has a top over the

occupant compartment that can be installed or removed by the operator of the vehicle; (*véhicule de type ouvert*)

“seat belt anchorage” means any component of a vehicle, other than the webbing or straps, involved in transferring seat belt loads to the vehicle structure, including the attachment hardware, seat frames, seat pedestals, the vehicle structure and any part of the vehicle whose failure causes separation of the belt from the vehicle structure; (*ancrage de ceinture de sécurité*)

“seating reference point” means the unique Design H-Point, as defined in section 3.11.1 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), that

(a) establishes the rearmost normal design driving or riding position of each designated seating position, taking into account all modes of adjustment — horizontal, vertical and tilt — in a vehicle,

(b) has X, Y and Z coordinates, as defined in section 3.3 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), established relative to the designed vehicle structure,

(c) simulates the position of the pivot centre of the human torso and thigh, and

(d) is the reference point employed to position the H-Point template with the 95th percentile leg, as described in section 4.1 of SAE Standard J826, *Devices for Use in Defining and Measuring Vehicle Seating Accommodation* (July 1995), or, if that template cannot be positioned, the reference point when the seat is in its rearmost adjustment position; (*point de référence de position assise*)

**(2) The definitions “ancrage du siège”, “ceinture-baudrier” and “dispositif universel d’ancrages**

**d’attaches inférieurs” in subsection 2(1) of the French version of the Regulations are replaced by the following:**

« ancrage du siège » Toute pièce qui transmet à la structure du véhicule les forces exercées sur le siège du véhicule. (*seat anchorage*)

« ceinture-baudrier » S’entend de la partie d’une ceinture de sécurité qui a pour objet de restreindre le mouvement au niveau de la poitrine et des épaules. (*upper torso restraint*)

« dispositif universel d’ancrages d’attaches inférieurs » Dispositif, autre qu’une ceinture de sécurité, qui est conçu pour assujettir la partie inférieure d’un ensemble de retenue ou d’un coussin d’appoint au véhicule et qui transmet à la structure du véhicule ou au siège les forces exercées par l’ensemble de retenue ou le coussin d’appoint et par l’occupant de l’un ou de l’autre. (*lower universal anchorage system*)

**(3) Subsection 2(1) of the Regulations is amended by adding the following in alphabetical order:**

“hearse” means a vehicle that contains only one row of occupant seats, is designed exclusively for transporting a body and casket and is equipped with features to secure a casket in place during the operation of the vehicle; (*corbillard*)

**(4) Subsection 2(2) of the Regulations is replaced by the following:**

(2) In the case of any bench or split-bench seat having more than 1 270 mm of hip room, as measured in accordance with sections 6.1.34, 6.2.31 and 6.4.27 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), in a passenger car, truck or multi-purpose passenger vehicle having a GVWR of less than 4

536 kg, the seat shall be deemed to contain not less than three designated seating positions unless the seat design or vehicle design is such that the centre position is not capable of being used as a seating position.

**2. Subsection 111(14) of Schedule IV to the Regulations is amended by adding the word “and” at the end of paragraph (a) and by replacing paragraphs (b) and (c) with the following:**

(b) “heel point” referred to in that Recommended Practice and in other documents referenced in that Recommended Practice means the “accelerator heel point (AHP)” as defined in section 3.16.1 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), and the position of the heel point is that determined by the manufacturer.

**3. Subparagraph 115(2)(c)(ii) of Schedule IV to the English version of the Regulations is replaced by the following:**

(ii) located inside the occupant compartment, and

**4. (1) Paragraph 202(2)(a) of Schedule IV to the French version of the Regulations is replaced by the following:**

a) soit, lorsque le bâti du siège est soumis à un essai comportant une accélération avant d’au moins 8 g, limite le mouvement angulaire vers l’arrière de la ligne de référence de la tête à 45° par rapport à la ligne de référence du torse;

**(2) Paragraph 202(3)(e) of Schedule IV to the French version of the Regulations is replaced by the following:**

e) une accélération avant doit être appliquée au bâti du siège de sorte que, lorsqu’elle est représentée

graphiquement, l'ampleur de la courbe d'accélération soit comprise entre une demi-sinusoïde d'amplitude 8 g et d'une durée de 80 millisecondes et une demi-sinusoïde d'amplitude 9,6 g et d'une durée de 96 millisecondes;

**5. Paragraph 204(4)(c) of Schedule IV to the Regulations is replaced by the following:**

(c) convertible and open-body type vehicles have the top, if any, correctly in place in the configuration of a closed occupant compartment;

**6. (1) Paragraph 208(22)(a) of Schedule IV to the Regulations is replaced by the following:**

(a) each anthropomorphic test device shall be completely contained within the outer surface of the vehicle occupant compartment;

**(2) Paragraph 208(23)(b) of Schedule IV to the French version of the Regulations is replaced by the following:**

b) le véhicule, qui se déplace longitudinalement vers l'avant à une vitesse d'au plus 48km/h, heurte une barrière fixe formant un angle de  $90^{\circ} \pm 5^{\circ}$  avec l'axe de déplacement du véhicule;

**(3) The portion of subsection 208(26) of Schedule IV to the English version of the Regulations before paragraph (a) is replaced by the following:**

(26) If a vehicle is equipped at a designated seating position with an air bag, the vehicle shall, if scheduled maintenance or replacement of the air bag is required, have a label permanently affixed within the occupant compartment of the vehicle stating, in letters of not less than 6 points in height, in both official languages, the manufacturer's recommended maintenance or replacement schedule by

**7. (1) Subsections 210(1) to (2.1) of Schedule IV to the Regulations are replaced by the following:**

**210.** (1) The following seat belt anchorages shall be installed in a designated seating position in respect of which a seat belt assembly has been installed under section 208:

(a) if a Type 1 seat belt assembly has been installed, seat belt anchorages for a pelvic restraint; or

(b) if a Type 2 seat belt assembly has been installed, seat belt anchorages for a combination pelvic and upper torso restraint.

(2) Only the strength test requirements set out in subsections (7) to (10) apply to enclosed motorcycles.

**(2) Subparagraph 210(4)(a)(iii) of Schedule IV to the Regulations is replaced by the following:**

(iii) in the case of a seat with a travel of more than 70 mm, a point 64 mm to the fore of, and 10 mm above, the seating reference point

**(3) Paragraph 210(5)(a) of Schedule IV to the Regulations is replaced by the following:**

(a) the H-Point of the template is located at the unique Design H-Point of the seat, as defined in section 3.11.1 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), at the full rearward and full downward position of the seat; and

**(4) Subsections 210(7) and (8) of Schedule IV to the Regulations are replaced by the following:**

(7) Except in the case of side-facing seats, when the seat belt anchorages for a Type 1 seat belt assembly or for the pelvic portion of a Type 2 seat belt assembly that is

equipped with a detachable upper torso restraint are tested for strength in accordance with *Test Method 210 — Seat Belt Anchorages* (January 2006) by applying a force of 22 241 N, none of the seat belt anchorages shall separate completely from the vehicle structure or seat structure.

(8) When the seat belt anchorages for the pelvic portion and for the upper torso portion of a Type 2 seat belt assembly are tested for strength in accordance with *Test Method 210 — Seat Belt Anchorages* (January 2006) by simultaneously applying a force of 13 345 N, none of the seat belt anchorages shall separate completely from the vehicle structure or seat structure.

**(5) Paragraph 210(10)(b) of Schedule IV to the Regulations is replaced by the following:**

(b) laterally adjacent but not common to the same seat and at least one of the anchorages is located within 305 mm of the anchorage for the adjacent seating position, as measured between the vertical centrelines of the bolt holes or, in designs using another means of attachment to the vehicle structure, the centroids of those means.

**(6) Subsection 210(11) of Schedule IV to the Regulations is replaced by the following:**

(11) The English and French versions of the owner's manual for a three-wheeled vehicle, passenger car, multi-purpose passenger vehicle, bus or truck with a GVWR of 4 536 kg or less and rear designated seating positions, other than a school bus, shall contain a statement indicating that children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

**8. (1) Subsection 210.1(2) of Schedule IV to the Regulations is replaced by the following:**



(2) This section does not apply to

(a) a designated seating position at which a built-in child restraint system is provided that is not part of a removable vehicle seat; or

(b) a hearse.

**(2) The portion of subsection 210.1(3) of Schedule IV to the Regulations before paragraph (e) is replaced by the following:**

(3) Subject to subsection (3.3), a user-ready tether anchorage shall be installed in a vehicle, other than a convertible or an open-body type vehicle,

(a) for each forward-facing designated seating position, other than that of the driver, in a vehicle that has only one row of forward-facing designated seating positions;

(b) for each forward-facing designated seating position in the second row of seating positions in a passenger car, three-wheeled vehicle or truck;

(c) for all forward-facing designated seating positions that are located to the rear of the first row of designated seating positions in a multi-purpose passenger vehicle that has less than five designated seating positions;

(d) for each of any three forward-facing designated seating positions that are located to the rear of the first row of designated seating positions in a multi-purpose passenger vehicle that has five or more designated seating positions;

**(3) Subsection 210.1(3.2) of Schedule IV to the Regulations is repealed.**

**(4) The portion of subsection 210.1(5) of Schedule IV to the Regulations before subparagraph (a)(ii) is replaced by the following:**

(5) Subject to subsections (5.1) and (7), the portion of each user-ready tether anchorage that is designed to bind with a tether strap hook shall be located within the shaded zone, as shown in Figures 3 to 7, of the designated seating position for which it is installed, with reference to the H-point of a template described in section 4.1 of SAE Standard J826, *Devices for Use in Defining and Measuring Vehicle Seating Accommodation* (July 1995), if

(a) the H-Point of the template is located

(i) at the unique Design H-Point of the designated seating position, as defined in section 3.11.1 of SAE Recommended Practice J1100, *Motor Vehicle Dimensions* (February 2001), at the full downward and full rearward position of the seat, or

**(5) Subsection 210.1(6) of Schedule IV to the Regulations is repealed.**

**(6) Paragraph 210.1(7)(c) of Schedule IV to the Regulations is replaced by the following:**

(c) when tested after being installed as it is intended to be used, is of sufficient strength to withstand, with the user-ready tether anchorage, the force referred to in subsection (8).

**(7) The portion of subsection 210.1(8) of Schedule IV to the Regulations before subparagraph (a)(i) is replaced by the following:**

(8) Subject to subsection (10), every user-ready tether anchorage in a row of designated seating positions shall, when tested, withstand the application of a force of 10 000 N

(a) applied by means of one of the following types of test devices, installed as a child restraint system would be in accordance with the vehicle manufacturer's installation

instructions, namely,

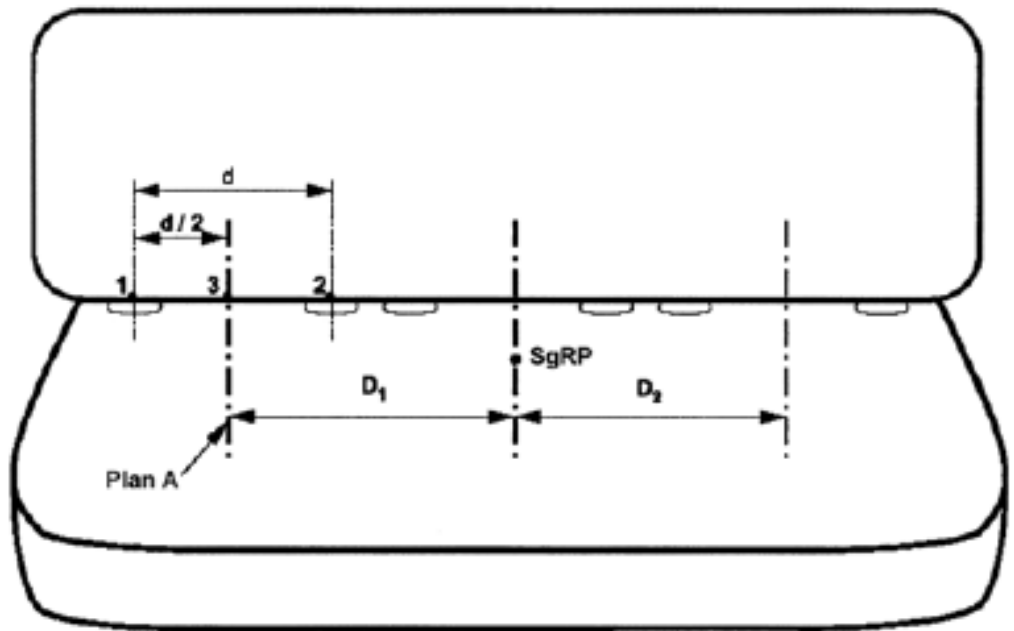
**(8) Subsections 210.1(9) to (11) of Schedule IV to the Regulations are replaced by the following:**

(10) If the zones in which tether anchorages are located overlap and if, in the overlap area, a user-ready tether anchorage is installed that is designed to accept the tether strap hooks of two restraint systems simultaneously, both portions of the tether anchorage that are designed to bind with a tether strap hook shall withstand the force referred to in subsection (8) applied to both portions simultaneously.

(11) If a bench seat in a bus or a row of designated seating positions in another vehicle has more than one user-ready tether anchorage and a distance of 400 mm or more, measured in accordance with Figure 20, separates the midpoints of adjacent designated seating positions, the force referred to in subsection (8) or (10), as the case may be, shall be applied simultaneously to each user-ready tether anchorage in the manner specified in that subsection.

**(9) Figures 8 to 11 and 19 of section 210.1 of Schedule IV to the Regulations are repealed.**

**(10) Figure 20 of section 210.1 of Schedule IV to the Regulations is replaced by the following:**



**Legend :**

**d = centre to centre distance between the bars of a lower universal anchorage system for a given seating position (nominal distance of 280 mm)**

**D = distance between vertical longitudinal planes located midway between the bars of a lower universal anchorage system for a given seating position**

**SgRP = seating reference point**

**Notes:**

**1. Drawing not to scale**

**2. The midpoint of a designated seating position lies in the vertical longitudinal plane that is equidistant from the vertical longitudinal planes through the geometric centre of each of the two bars of the lower universal anchorage system installed at the seating position. For those designated seating positions that do not have the lower universal anchorage system bars, the midpoint of a designated**

**seating position lies in the vertical longitudinal plane that passes through the SgRP of the seating position**

**3. The distance shall be measured between the vertical longitudinal planes passing through the midpoints of adjacent designated seating positions along a line perpendicular to the planes**

**Figure 20 — Measurement of Distance Between Adjacent Designated Seating Positions for Use in Simultaneous Testing**

**9. (1) Subsection 210.2(2) of Schedule IV to the Regulations is amended by adding the word “or” at the end of paragraph (c) and by adding the following after paragraph (c):**

(d) a hearse.

**(2) Paragraph 210.2(3)(b) of Schedule IV to the Regulations is replaced by the following:**

(b) have a diameter of 6 mm  $\pm$  0.1 mm and a length, measured in accordance with Figure 12, of not less than 25 mm;

**(3) Paragraphs 210.2(3)(d) and (e) of Schedule IV to the French version of the Regulations are replaced by the following:**

d) elles sont une partie intégrante et permanentes du siège, de l’ancrage de celui-ci ou de la structure du véhicule de manière qu’elles ne puissent être enlevées qu’à l’aide d’outils;

e) elles sont fixées rigidement au siège, à l’ancrage de celui-ci ou à la structure du véhicule de manière que, le siège étant réglé dans le véhicule dans sa position la plus reculée et la plus basse et le dossier se trouvant dans la position assise nominale, elles ne puissent se déformer de

plus de 5 mm lorsqu'elles sont assujetties à une force de 100 N dans une quelconque direction;

**(4) Paragraph 210.2(4)(c) of Schedule IV to the English version of the Regulations is replaced by the following:**

(c) in two forward-facing designated seating positions that are located to the rear of the first row of seating positions in a multi-purpose passenger vehicle that has more than two rows of seating positions, but at least one lower universal anchorage system must be installed in a seating position in the second row of seating positions;

**(5) Subsections 210.2(5) and (6) of Schedule IV to the Regulations are replaced by the following:**

(6) A lower universal anchorage system shall be installed only at a designated seating position that is equipped with a user-ready tether anchorage, except in the case of a convertible or an open-body type vehicle.

**(6) Subsection 210.2(10) of Schedule IV to the Regulations is repealed.**

**(7) The portion of subsection 210.2(13) of Schedule IV to the French version of the Regulations before paragraph (a) is replaced by the following:**

(13) Lorsqu'il est mis à l'essai, le dispositif universel d'ancrages d'attaches inférieurs installé dans une rangée de places assises désignées ne doit se dégager complètement ni du siège du véhicule, ni de l'ancrage du siège, ni de la structure du véhicule, sous l'action :

**(8) The portion of paragraph 210.2(13)(a) of Schedule IV to the Regulations before subparagraph (iii) is replaced by the following:**

(a) subject to subsection (15), by pulling with a force of

15 000 N, which force is

(i) applied by means of a test device shown in Figures 7 and 8 that is installed using both the associated user-ready tether anchorage and the lower universal anchorage system as a child restraint system would be installed in accordance with the vehicle manufacturer's instructions,

(ii) applied in a forward direction parallel to the vehicle's vertical longitudinal plane through the X point on the test device, starting with a pre-load force of 500 N,

**(9) Subparagraph 210.2(13)(b)(ii) of the Regulations is replaced by the following:**

(ii) applied along a vertical longitudinal plane that is at an angle of  $75^{\circ} \pm 5^{\circ}$  to either side of a vertical longitudinal plane that is parallel to the vehicle's longitudinal centre line, through the X point on the test device, starting with a pre-load force of 500 N,

**(10) Subsections 210.2(14) and (15) of Schedule IV to the Regulations are replaced by the following:**

(14) When a force of 5 000 N is applied in accordance with paragraph (13)(b), the lower universal anchorage system shall not permit the X point on the test device to be displaced in the direction of the applied force by more than 125 mm if the test device is installed in an outboard designated seating position or by more than 150 mm if the test device is installed in an inboard designated seating position.

(15) A lower universal anchorage system installed in a designated seating position that is not equipped with an associated user-ready tether anchorage shall be tested by the application of a force of 11 000 N that is

(a) applied by means of a test device shown in Figures 7 and 8 that is installed using only the lower universal

anchorage system;

(b) applied in a forward direction parallel to the vehicle's vertical longitudinal plane through the X point on the test device, starting with a pre-load force of 500 N;

(c) applied initially, along a line above the horizontal line, at an angle of  $10^{\circ} \pm 5^{\circ}$  to it;

(d) attained within 30 seconds, at any onset force rate of not more than 135 000 N/s; and

(e) maintained at a level of 11 000 N for a minimum of one second.

**(11) The portion of subsection 210.2(18) of Schedule IV to the Regulations before paragraph (a) is replaced by the following:**

(18) Subject to subsections (19) and (20), if a lower universal anchorage system is not visible along a line making an upward angle of at least  $30^{\circ}$  with the horizontal plane without compression of the seat cushion or seat back of the seating position, the presence of each bar of the system shall be indicated by the symbol shown in Figure 10, consisting of a circle containing a pictogram, which symbol shall meet the following conditions:

**(12) Subsection 210.2(21) of Schedule IV to the Regulations is repealed.**

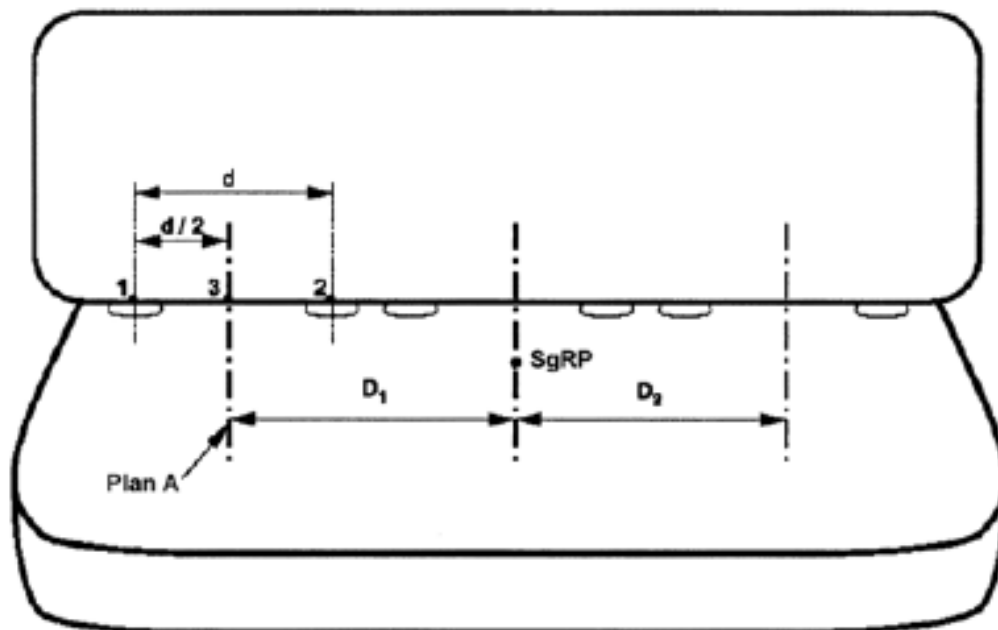
**(13) Paragraph 210.2(22)(b) of Schedule IV to the Regulations is repealed.**

**(14) Subsection 210.2(22) of Schedule IV to the Regulations is amended by striking out the word “and” at the end of paragraph (e), by adding the word “and” at the end of paragraph (f) and by adding the following after paragraph (f):**



(g) if a convertible or an open-body type vehicle has no designated seating position equipped with a user-ready tether anchorage, a statement that neither a child restraint system nor a booster cushion requiring the use of a tether strap can be properly secured in the vehicle.

**(15) Figure 9 of section 210.2 of Schedule IV to the Regulations is replaced by the following:**



**Legend:**

**$d$  = centre to centre distance between the bars of a lower universal anchorage system for a given seating position (nominal distance of 280 mm)**

**$D$  = distance between vertical longitudinal planes located midway between the bars of a lower universal anchorage system for a given seating position**

**SgRP = seating reference point**

**Notes:**

**1. Drawing not to scale**

**2. The midpoint of a designated seating position lies in the vertical longitudinal plane that is equidistant from the vertical longitudinal planes through the geometric centre of each of the two bars of the lower universal anchorage system installed at the seating position. For those designated seating positions that do not have the lower universal anchorage system bars, the midpoint of a designated seating position lies in the vertical longitudinal plane that passes through the SgRP of the seating position**

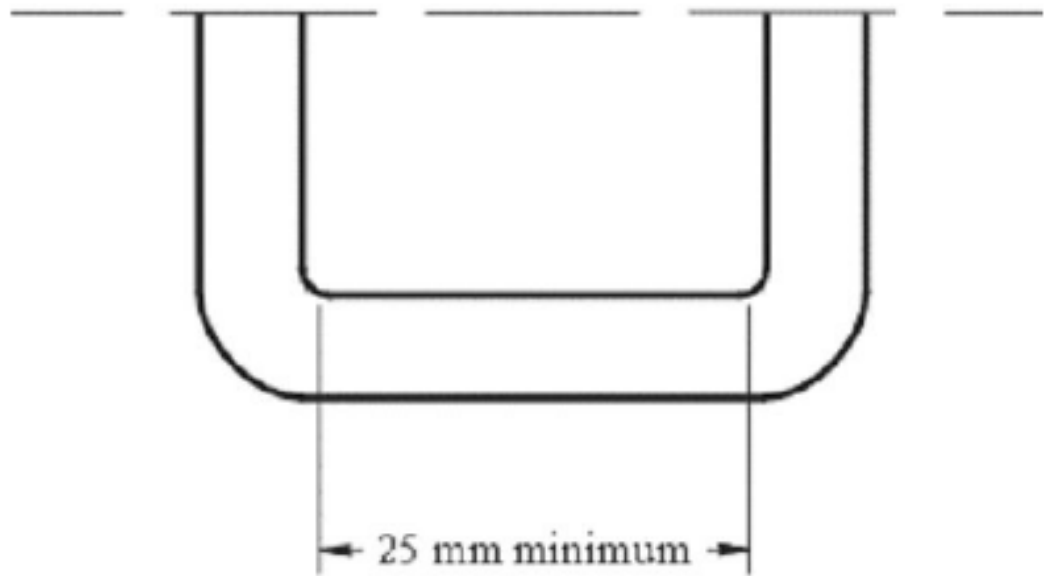
**3. The distance shall be measured between the vertical longitudinal planes passing through the midpoints of adjacent designated seating positions along a line perpendicular to the planes**

**Figure 9 — Measurement of Distance Between Adjacent Designated Seating Positions for Use in Simultaneous Testing**

**(16) Note 2 to Figure 11 of section 210.2 of Schedule IV to the Regulations is replaced by the following:**

**2.  $50 \text{ mm} \leq a \leq 100 \text{ mm}$ .**

**(17) Section 210.2 of Schedule IV to the Regulations is amended by adding the following after Figure 11:**



**Note: Drawing not to scale**

**Figure 12 — Width of Lower Universal Anchorage Bar, Top View**

**10. Subsection 212(2) of Schedule IV to the French version of the Regulations is replaced by the following:**

(2) Lorsqu'un véhicule, préparé et chargé selon les paragraphes (5) à (7), qui avance en ligne droite à une vitesse d'au plus 48 km/h (30 mi/h), percute une barrière fixe pour essais de collision perpendiculaire à son axe de déplacement, le cadre de son pare-brise doit, lorsqu'il est mis à l'essai conformément au paragraphe (8), retenir au moins la périphérie de pare-brise minimale prévue aux paragraphes (3) ou (4).

**11. (1) The portion of subsection 213.4(2) of Schedule IV to the Regulations before paragraph (a) is replaced by the following:**

(2) Every built-in child restraint system when tested in accordance with subsection (1) shall, subject to subsection (6), provide restraint against rearward movement of the head of the anthropomorphic test device by means of a

continuous seat back that is an integral part of the system and that has

**(2) Paragraph 213.4(2)(a) of Schedule IV to the English version of the Regulations is replaced by the following:**

(a) a height, measured along the system seat back surface in the vertical longitudinal plane passing through the longitudinal centre line of the child restraint system from the lowest point on the system seating surface that is contactable by the buttocks of the seated anthropomorphic test device, of at least 500 mm (20 inches); and

**(3) The portion of paragraph 213.4(4)(a) of Schedule IV to the Regulations before subparagraph (i) is replaced by the following:**

(a) subject to subsection (6), provide restraint against rearward movement of the head of the anthropomorphic test device by means of a continuous seat back that is an integral part of the cushion and that

**(4) Paragraph 213.4(5)(d) of Schedule IV to the Regulations is replaced by the following:**

(d) subject to subsection (6), provide restraint against rearward movement of the head of the anthropomorphic test device by means of a continuous seat back that is an integral part of the system and that limits the rearward rotation of the anthropomorphic test device's head so that the angle between the head and the torso is at no time during the impact testing greater than 45° as compared to the head-torso angle prior to the test.

**(5) Paragraphs 213.4(17)(a) and (b) of Schedule IV to the Regulations are replaced by the following:**

(a) a statement indicating

(i) in the case of a built-in child restraint system, the weight and height range of the children for whom it is designed, as recommended by the manufacturer, and

(ii) in the case of a built-in booster cushion, that it is for use by persons who weigh at least 18 kg (40 pounds) and who are at least the minimum height recommended by the manufacturer;

(b) a statement warning that failure to follow the manufacturer's instructions on the use of the system or the cushion can result in the person striking the vehicle's interior during a sudden stop or crash;

**(6) Paragraph 213.4(17)(c) of Schedule IV to the English version of the Regulations is replaced by the following:**

(c) in the case of a built-in child restraint system that has belts designed to restrain the child, a statement to adjust snugly the belts provided with the system around the child; and

**(7) Subsections 213.4(18) and (19) of Schedule IV to the Regulations are replaced by the following:**

(18) The weights and heights referred to in paragraph (17)(a) shall be expressed with the metric measurements stated first, followed by the equivalent imperial measurements in parentheses.

(19) Every built-in child restraint system and built-in booster cushion shall be accompanied by printed instructions in both English and French that provide a step-by-step procedure, including appropriate diagrams, for using the built-in child restraint system or built-in booster cushion, for positioning a person in the system or on the cushion, for adjusting the belts provided and, if applicable, for adjusting the restraint harness to fit the person.

**12. Subsection 219(3) of Schedule IV to the French version of the Regulations is replaced by the following:**

(3) Lorsqu'un véhicule préparé conformément au paragraphe (6) et se déplaçant longitudinalement vers l'avant à une vitesse d'au plus 48 km/h (30 mi/h), heurte une barrière de collision fixe et perpendiculaire à sa ligne de déplacement, aucune de ses parties extérieures à l'habitacle, à l'exception des moulures du pare-brise ou autres composantes conçues pour être normalement en contact avec le pare-brise, ne doit pas pénétrer :

a) soit le gabarit de zone protégée jusqu'à une profondeur supérieure à 6 mm (1/4 po);

b) soit la surface interne de la partie du pare-brise qui se trouve dans l'OJ, au-dessous de la zone protégée.

**MOTOR VEHICLE RESTRAINT SYSTEMS AND BOOSTER CUSHIONS SAFETY REGULATIONS**

**13. The definition “dispositif universel d'ancrages d'attaches inférieurs” in subsection 1(1) of the French version of the *Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations* ([see footnote 2](#)) is replaced by the following:**

« dispositif universel d'ancrages d'attaches inférieurs »  
Dispositif, autre qu'une ceinture de sécurité, qui est conçu pour assujettir la partie inférieure d'un ensemble de retenue ou d'un coussin d'appoint au véhicule et qui transmet à la structure du véhicule ou au siège les forces exercées par l'ensemble de retenue ou le coussin d'appoint et par l'occupant de l'un ou de l'autre. (*lower universal anchorage system*)

**COMING INTO FORCE**

**14. (1) These Regulations, except subsection 9(14),**

**come into force on the day on which they are registered.**

**(2) Subsection 9(14) comes into force on September 1, 2009.**

## **REGULATORY IMPACT ANALYSIS STATEMENT**

*(This statement is not part of the Regulations.)*

### **Description**

The *Canada Motor Vehicle Safety Standards* (CMVSS) 210, 210.1, 210.2 and 213.4, which are part of the *Motor Vehicle Safety Regulations* (MVSR) [\(see footnote 3\)](#), are amended to resolve a testing conflict between the user-ready tether anchorages (tether anchorage) standard (CMVSS 210.1) and the lower universal anchorage systems (lower anchorages) standard (CMVSS 210.2), enhance consumer awareness of convertibles and open-body type vehicles not equipped with tether anchorages, increase the number of tether anchorages in Multi-purpose Passenger Vehicles (MPVs), and align several other requirements with those of the United States standard entitled *Child Restraint Anchorage Systems* (FMVSS 225). It also clarifies the requirements for the installation of seat belt anchorages in buses, harmonizes the definition and the labelling requirements for built-in booster cushions (CMVSS 213.4) with those for add-on booster cushions, and resolves several MVSR issues raised by the Standing Joint Committee for the Scrutiny of Regulations (SJC).

### **Background**

#### Resolving a testing conflict between the tether anchorage and lower anchorage standards

Test data shows that in the event of a collision, an attached tether strap will greatly improve the ability of a

child restraint system to protect young passengers against head impact or hyperextension of the neck [\(see footnote 4\)](#). On September 1, 2000, it became mandatory for all passenger cars, MPVs and trucks with a gross vehicle weight rating of 3,864 kg or less and an unloaded vehicle mass of 2,495 kg or less to be equipped with tether anchorages for securing the tether straps of child restraint systems (CMVSS 210.1) [\(see footnote 5\)](#). At that time, convertibles and open-body type vehicles were excluded from this requirement. However, a conflict existed between two standards. While convertibles and open-body type vehicles were not required to have tether anchorages, the testing standard for the lower anchorages (CMVSS 210.2) still required using the tether anchorage. This amendment specifies the force to be applied when a vehicle has only a lower anchorage, thereby resolving the testing conflict that existed between CMVSS 210.1 and 210.2.

The testing procedure to be used for seating positions having only lower anchorages without an associated tether anchorage is now 11 000 N which is compatible with the requirements found within the United States standard. However, convertibles and open-body type vehicles that are voluntarily equipped with both lower anchorages and tether anchorages are still required to be certified and tested with a load of 15 000 N like all other vehicles that have similar equipment.

#### Enhancing consumer awareness when tether anchorages are missing

The effectiveness of a child restraint system depends on a number of factors, including how well vehicle users are able to install a child restraint device that includes a tether strap. Similarly, when a vehicle, such as a convertible or open-body type vehicle, is not equipped with a tether anchorage, this amendment will require a statement in the owner's manual to inform the user that a restraint system or a booster cushion requiring the use of a tether strap cannot be properly secured in the vehicle.



## Increasing the number of tether anchorages in MPVs

Currently, MPVs with six or more designated seating positions are required to have at least three tether anchorages. Since MPVs are an increasingly popular vehicle choice with young families, the government strongly believes that the same requirement should apply to MPVs with five designated seating positions in order to increase safety for traveling children. The government is continuing to require two tether anchorages when there are less than five designated seating positions in an MPV. These requirements are aligned with those of the United States.

## Aligning several other requirements with those of the United States

The government is also aligning some of its requirements with those of the United States standard, namely:

- Introducing an exemption and a definition for a “hearse” following the exemption to “funeral coaches [\(see footnote 6\)](#)” in the as of November 15, 2004;
- Revising the vertical positioning [\(see footnote 7\)](#) upper limit of the lower anchorage symbol from 75 mm to 100 mm to align it with the latest change made by the ;
- Incorporating the latest changes to figure 20 of CMVSS 210.1 and figure 9 of CMVSS 210.2 pertaining to the simultaneous testing of tether and lower anchorages [\(see footnote 8\)](#); and
- Including figure 12 depicting the length of the lower anchorage bars in CMVSS 210.2 [\(see footnote 9\)](#).

## Clarifying the requirements for the installation of seat belt anchorages in buses

The government is also correcting an oversight in the seat belt anchorages standard (CMVSS 210). While some buses

with a gross vehicle weight rating less than 4,536 kg are required to be equipped with seat belts, no seat belt anchorage requirements were prescribed. The CMVSS 210 is being amended in order to include seat belt anchorage requirements for buses requiring seat belts. It is also being clarified that the instructions required in the owner's manual under CMVSS 210 should reflect the exemption given to school buses. In addition, the reference to the Society of Automotive Engineers (SAE) Recommended Practice J1100, *Motor Vehicle Dimensions*, is being updated to reference a more recent version, which is dated February 2001.

### Harmonizing the requirements between built-in and add-on booster cushions

In order to ensure that the safety message being conveyed to the Canadian public is consistent across all booster cushion applications, a discrepancy between the booster cushion requirements of the MVSR and the Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations (RSSR) is corrected. While the requirements governing add-on booster cushions of the RSSR require a label that indicates a minimum mass use limit of 18 kg (40 pounds), the requirements governing built-in booster cushions of the MVSR (CMVSS 213.4) did not include such requirements. The requirement of CMVSS 213.4 is modified to require a label that indicates the minimum mass use limit of 18 kg (40 pounds) for built-in booster cushions.

Under the MVSR, a child is a person whose mass is between 9 kg (20 pounds) and 22 kg (48 pounds) [\(see footnote 10\)](#) inclusive, which implied that the cushion was meant for use only by a child as defined under subsection 2(1) of the MVSR. In order to promote the use of a built-in booster cushion by all persons that weigh 18 kg (40 pounds) or more, the definition of “built-in booster cushion” is amended to replace the term “child” by

“person.” The text of CMVSS 213.4 is also being modified to make use of the word “person” rather than “child” when referring to a built-in booster cushion.

### Clarifying several MVSR issues raised by the SJC

The SJC proposed that editorial clarifications were required to several of the MVSR and RSSR. The clarifications are expected to have no impact on vehicle manufacturers as they relate to the compatibility of French and English definitions and other terminology within the MVSR and RSSR as summarized below:

- The definition for “seat belt anchorage” of the MVSR is clarified to make the French and English versions compatible with each other;
- The French definition for “ceinture-baudrier” of the MVSR is clarified to make it compatible with the English version of the definition;
- The French definition for “ancrage du siège” of the MVSR is clarified by substituting the words “structure du véhicule” for “bâti du véhicule”;
- The French definition for “dispositif universel d’ancrages d’attaches inférieurs” of the MVSR is clarified by substituting the words “structure du véhicule” for “bâti du véhicule”;
- The French versions of paragraphs 202(2)(a) and 202(3)(e) of the MVSR are clarified by substituting the words “bâti du siège” for “bâti supportant le siège”;
- The French version of paragraph 208(23)(b) of the MVSR is clarified to better reflect the English version of the requirement;
- The definition “seating reference point” is amended in order to incorporate by reference a more recent version of SAE Recommended Practice J1100 and in turn all references to the latter in the MVSR are being updated to that version;
- The converted numerical values (from imperial to metric) in the Test Method for CMVSS 210 as well as in the following provisions are modified to align with

the equivalent United States values: subsection 210(7) by replacing 22 240 N with 22 241 N, subsection 210(8) by replacing 13 344 N with 13 345 N, subparagraph 210(4) (a) (iii) by replacing 63.5 mm with 64 mm and 9.5 mm with 10 mm, and paragraph 210(10) (b) by replacing 304.8 mm with 305 mm; and

- An inconsistency between the English and French versions of paragraph 210.2(4) (c) of Schedule IV to the MVSR is being corrected.

### ***Alternatives***

There are no alternatives to these regulatory amendments that would resolve existing testing conflicts, correct discrepancies in the regulatory text, harmonize provisions between the RSSR and the MVSR, and align requirements with those of the United States.

The following alternatives were considered to promote the proper installation of child restraint systems and booster cushions in convertibles and open-body type vehicles:

- maintain the status quo;
- permit voluntary compliance by the industry; and
- introduce a regulatory requirement concerning tether anchorages in all convertibles and open-body type vehicles.

The government determined that the safety benefits of tether anchorages are clear, and maintaining the status quo regarding convertibles and open-body type vehicles might contribute to public confusion when attempting to install a child restraint system or a booster cushion requiring the use of a tether strap in these vehicles if no tether anchorage is provided. Consequently, the status quo option was rejected.

Permitting voluntary compliance by the industry was also considered and rejected. It was expected that

manufacturers might offer tether anchorages or information in the owner's manual on some of the products they sell in Canada but not on all vehicle models. The government was concerned that this would cause unnecessary public confusion regarding the possible use and the appropriate installation procedures. The government did not consider that a voluntary approach would result in the same level of safety as a regulated approach. For these reasons, this alternative was not adopted.

### ***Benefits and costs***

The average cost to add one tether anchorage to a vehicle is estimated to be less than a dollar. The total cost per vehicle for a manufacturer producing a convertible type vehicle with three rear-designated seating positions is no greater than \$3.

Resolving the testing conflict between the tether anchorage and lower anchorage standards (respectively CMVSS 210.1 and 210.2) will ensure that manufacturers do a more rigorous test of the tether anchorages, thereby enhancing public safety.

Requiring manufacturers to supply information to convertible and open-body type vehicle owners will raise the public awareness that child restraint systems and booster cushions requiring the use of a tether strap cannot be properly secured in convertibles or open-body type vehicles not equipped with tether anchorages.

The new requirement for a minimum of three tether anchorages in MPVs with five or more designated seating positions will not generate additional costs for manufacturers as the majority of them already voluntarily comply with this requirement. This requirement has been in place in the United States since August 31, 2002, for tether anchorages voluntarily installed. The amendment increases the protection of children in MPVs by requiring

three tether anchorages rather than two for MPVs equipped with five or more designated seating positions.

### **Environmental assessment**

Under the Department of Transport's Strategic Environmental Assessment policy, a preliminary evaluation of the possible effects of this amendment was completed. It was determined that this amendment has no impact on the environment.

### **Consultation**

The Government has established a systematic and extensive consultation process that seeks to keep the automotive industry, public safety organizations, other levels of government, and the general public informed of contemplated and recent changes to the regulations governing motor vehicles in Canada. This process includes several mechanisms for all interested parties to provide their comments. The Government's intention to make this amendment to its regulations was first announced in the Regulatory Plan published by the Road Safety and Motor Vehicle Regulation Directorate, which is distributed to automotive manufacturers, public safety organizations, and various governmental bodies. Comments received in response to this item on the Regulatory Plan, were considered in the development of the proposed amendment.

### **Pre-publication**

The proposed amendments were pre-published in the *Canada Gazette*, Part I, on November 18, 2006 followed by a 75-day comment period. The comment period was further extended at the request of the automotive industry, given that the government had submitted many requests in the same time frame. Thus, the comment period closed on March 1, 2007. Further comments were also accepted at government-industry meetings, and all

responses were taken into consideration in the development of the amendments.

The main comments came from the Canadian Vehicle Manufacturers' Association (CVMA) [\(see footnote 11\)](#) and the Association of International Automobile Manufacturers of Canada (AIAMC) [\(see footnote 12\)](#) as well as by some of their respective members. In general, stakeholders are supportive of these amendments.

Support was received for aligning the Canadian requirements pertaining to the installation of lower anchorages and tether anchorages with the United States requirements. However, a concern was raised that the Canadian requirement for a preload time of two to five minutes was not sufficient to make certain adjustments, taking photographs and measurements. Hence, it was not necessary to have this requirement in the Regulations. The government agreed with this comment. Thus, the timing requirement of two to five minutes was removed. This further aligns the Canadian requirements with those of the United States and reduces technical barriers to trade.

All stakeholders expressed some concerns with the feasibility of installing tether anchorages in convertibles and open-body type vehicles that incorporate active rollover protection devices and/or foldable roof compartments. Their concern related to the cost and timing of installing such devices in these type of vehicles. Those affected, indicated that such a requirement would involve a total redesign of their vehicles, which was not considered feasible in the short term since many of their vehicles are already in production or on the market. The CVMA and AIAMC referred to a minimum lead-time of eight years to implement the changes. In order to enhance public safety in a more timely manner, the government has developed an alternative to requiring tether anchorages on all convertibles and open-body type vehicles. The alternative consists of enhancing consumer awareness that convertible or open-body type vehicles not

equipped with tether anchorages are not suitable for the installation of child restraint systems and booster cushions requiring the use of a tether strap. Stakeholders support this alternative. Hence, as of September 1, 2009, all new convertibles and open-body type vehicles not equipped with tether anchorages will be required to have accompanying information available for the consumer to discourage the installation of a child restraint system or booster cushion requiring the use of a tether strap.

Comments were also made that given that the centers of a lower anchorage and a tether anchorage are not always in the same vertical place, the prescribed measurement to determine simultaneous loading of the anchorages was not compatible within subsection 210.1 and subsection 210.2. Subsection 210.1(11) and its reference to figure 20 described a different application for what was considered the center of a designated seating position, compared to what was implied under subsection 210.2(16) and its reference to figure 9. Under 210.1, the center of a designated seating position was based on the location of the tether anchorages, whereas the center of a designated seating position under 210.2 was based on the location of the lower anchorages. This same discrepancy was amended in the United States regulation in 2004 ([see footnote 13](#)). In order to maintain the Canadian and United States requirements closely aligned, the government is amending these provisions and their associated figures with those of the United States.

### ***Compliance and enforcement***

Motor vehicle and motor vehicle restraint and booster cushion manufacturers and importers are responsible for ensuring that their products comply respectively with the requirements of the MVSR and the RSSR. The Government of Canada monitors the self-certification programs of manufacturers and importers by reviewing their test documentation, inspecting vehicles as well as add-on restraints and booster cushions, and testing vehicles, add-



on restraints and booster cushions obtained in the open market. When a defect is found, the manufacturer or importer must issue a notice of defect to owners and to the Minister of Transport, Infrastructure and Communities. If a vehicle, add-on restraint or booster cushion does not comply with a safety standard, the manufacturer or importer is subject to prosecution and, if found guilty, may be fined as prescribed in the *Motor Vehicle Safety Act*.

### **Contact**

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Copies of Test Method 210, “Seat Belt Anchorages,” may be obtained on the Internet at:  
[www.tc.gc.ca/RoadSafety/mvstm\\_tsd/index\\_e.htm](http://www.tc.gc.ca/RoadSafety/mvstm_tsd/index_e.htm).

#### [Footnote a](#)

S.C. 1993, c. 16

#### [Footnote b](#)

S.C. 1999, c. 33, s. 351

#### [Footnote c](#)

S.C. 1993, c. 16

#### [Footnote 1](#)

C.R.C., c. 1038

#### [Footnote 2](#)

SOR/98-159

[Footnote 3](#)

C.R.C., c. 1038

[Footnote 4](#)

Society of Automotive Engineers, Inc. (SAE), 973304, *The Effect of Top Tether Strap Configurations on Child Restraint Performance*, France Legault, Bill Gardner and Alex Vincent, Transport Canada, 1997

[Footnote 5](#)

SOR/98-457

[Footnote 6](#)

The United States National Highway Traffic Safety Administration (NHTSA) Final Rule / Docket No. 2003-14711 / Federal Register / Vol. 69, No. 199 / Friday, October 15, 2004 / Rules and Regulations

[Footnote 7](#)

NHTSA Final Rule / Docket No. 2004-18793-1 / Federal Register / Vol. 69, No. 154 / Wednesday, August 11, 2004 / Rules and Regulations

[Footnote 8](#)

NHTSA Final Rule / Docket No. 2004-18793-1 / Federal Register / Vol. 69, No. 154 / Wednesday, August 11, 2004 / Rules and Regulations

[Footnote 9](#)

NHTSA Final Rule / Docket No. 2004-18793-1 / Federal Register / Vol. 69, No. 154 / Wednesday, August 11, 2004 / Rules and Regulations

[Footnote 10](#)

Transport Canada issued an *Order Modifying the Operation of the Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations and the Motor Vehicle Safety Regulations* on May 5, 2007. The Order included raising the upper weight limit from 22kg (48 pounds) to 30 kg

(66 pounds) in the definition of the term “child” to permit in Canada child restraint systems designed for children weighing up to 30kg.

#### [Footnote 11](#)

The CVMA represents DaimlerChrysler Canada Inc.; Ford Motor Company of Canada, Limited; General Motors of Canada Limited; and International Truck and Engine Corporation Canada.

#### [Footnote 12](#)

The AIAMC represents the following automotive manufacturers and importers as voting members: BMW Canada Inc.; Honda Canada Inc.; Hyundai Auto Canada; Kia Canada Inc.; Mazda Canada Inc.; Mercedes-Benz Canada Inc.; Mitsubishi Motor Sales of Canada, Inc.; Nissan Canada Inc.; Porsche Cars Canada Ltd.; Subaru Canada Inc.; Suzuki Canada Inc.; Toyota Canada Inc.; and Volkswagen Canada Inc.

#### [Footnote 13](#)

NHTSA Final Rule / Docket No. 2004-18793-1 / Federal Register / Vol. 69, No. 154 / Wednesday, August 11, 2004 / Rules and Regulations

#### **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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