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DOOR LOCK AND DOOR RETENTION COMPONENTS (gtr)

Proposal for draft amendments to global technical regulation No. 1

Proposal submitted by the expert from Japan */

The text reproduced below was prepared by the expert from Japan in order to complete the proposal of amendment to global technical regulation No. 1. It refers to ECE/TRANS/WP.29/AC.3/18 and it is based on a document without a symbol (informal document No. GRSP-42-09) distributed during the forty-second session of the Working Party on Passive Safety (GRSP). The modifications to the current text of gtr No. 1 are marked in bold characters or strikethrough characters.

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles with respect to passive safety. The present document is submitted in conformity with that mandate.

A. PROPOSAL

TEXT OF REGULATION

Paragraph 4.2.2.(b), amend to read:

"4.2.2.
b) a door latch system with a fully latch position and a door closure warning system. **The door latch closure warning system shall be located where it can be clearly seen by the driver.**"

Paragraph 5.1.3., amend to read:

"5.1.3. Load Test Three (**applicable only to back doors that open in a vertical direction**)
....."

Paragraph 5.1.5.1., amend to read:

"5.1.5.1. Each door hinge system shall:
.....
(d) On back doors only (**applicable only to back doors that open in a vertical direction**), not separate when a vertical load of 9,000 N is applied."

Annex 1

Paragraph 2.1.2.1.1., amend to read:

"2.1.2.1.1. ~~Adapt~~ **Attach** the test fixture to the mounting provisions of the latch and striker. Align ~~in~~ the direction of engagement parallel to the linkage of the fixture. Mount **the fixture with** the latch and striker in the fully latched position ~~to the test fixture~~ **in the test machine so as to apply a load perpendicular to the face of the latch.**"

Paragraph 2.1.2.2.1., amend to read:

"2.1.2.2.1. ~~Adapt~~ **Attach** the test fixture to the mounting provisions of the latch and striker. Align ~~in~~ the direction of engagement parallel to the linkage of the fixture. Mount **the fixture with** the latch and striker in the secondary latched position ~~to the test fixture~~ **in the test machine so as to apply a load perpendicular to the face of the latch.**"

Paragraph 2.2.2.1.1., amend to read:

"2.2.2.1.1. ~~Adapt~~ **Attach** the test fixture to the mounting provisions of the latch and striker. Mount the **fixture with** latch and striker in the fully latched position ~~to the test fixture~~ **in the test machine so as to apply a load in the direction of the latch opening.**"

Paragraph 2.2.2.2.1., amend to read:

"2.2.2.2.1. ~~Adapt~~ **Attach** the test fixture to the mounting provision of the latch and striker. ~~Align the direction of the engagement parallel to the linkage of the fixture.~~ Mount the **fixture with the** latch and striker in the secondary latched position ~~to the test fixture~~ in the test machine so as to apply a load perpendicular to the face of the latch."

Paragraph 2.3.2.1., amend to read:

"2.3.2.1. ~~Adapt~~ **Attach** the test fixture to the mounting provisions of the latch and striker. Mount the **fixture with** latch and striker in the fully latched position ~~to the test fixture~~ in the test machine so as to apply a load in the direction of the latch opening."

Annex 2

Paragraph 2.3.3.5., amend to read:

"2.3.3.5. Vertical Setup 1. **(applicable only to back doors that open in a vertical direction. Only for back doors).**"

Paragraph 2.3.3.6., amend to read:

"2.3.3.6. Vertical Setup 2. **(Applicable only to back doors that open in a vertical direction. Only for back doors).**"

Annex 4

Paragraph 3.6.1., amend to read:

"3.6.1. The force application plate is 150 mm in length, and 50 mm in width, and at least 15 mm in thickness. **The plate edges are rounded to a radius of 6 mm ± 1 mm.**"

Paragraph 3.6.3., amend to read:

"3.6.3. The force application plate is positioned **such that the long edge of the plate is as close to the edge of the interior as close to the** edge of the door as possible, ~~It is not necessary for the force application plate to be vertical.~~ **but not such that the forward edge of the plate is more than 12.5 mm from the interior edge...**"

Paragraph 3.7.1., amend to read:

"3.7.1. The force application plate is 300 mm in length, and 50 mm in width, and at **least 15 mm in thickness. The plate edges are rounded to a radius of 6 mm ± 1 mm.**"

Paragraph 3.7.3., amend to read:

"3.7.3. The force application plate is positioned **such that the long edge of the plate is as close to the edge of the interior as close to the** edge of the door as possible, ~~It is not necessary for the force application plate to be vertical.~~ **but not such that the forward edge of the plate is more than 12.5 mm from the interior edge...**"

Paragraph 4.1., amend to read:.

"4.1. Move each force application device at ~~a any rate of 20—90 mm per minute~~ **up to 2,000 N per minute, ...**"

B. JUSTIFICATION

Ad paragraph 4.2.2. (b)

The word "**latch**" should be deleted, because it is lacking in the text of the gtr a definition of it as well as in paragraph 5.1.5.4.(b).

With regard to "**The door latch closure warning system shall be located where it can be clearly seen by the driver**", it should be noted that there is not the same sentence in the Federal Motor Vehicle Safety Standard 206 (FMVSS 206). If this sentence would be added in this paragraph, FMVSS 206 should be aligned accordingly.

Ad paragraphs 5.1.3., 5.1.5.1.(d) and paragraphs 2.3.3.5. and 2.3.3.6. of Annex 2

It is intended to fully harmonize gtr No. 1 to FMVSS 206. The attached table refers to the contents of TRANS/WP.29/GRSP/2001/1 and shows that gtr No. 1 had the same requirements on back door from the former FMVSS 206. The revised text of FMVSS 206 has already transposed the gtr No. 1 and this limited application is taken into account.

Ad Annex 1 paragraphs 2.1.2.1.1. and 2.1.2.2.1.

The word "**in**" should be deleted in order to keep consistent the text of gtr No. 1 with those of Regulation No. 11, 03 series of amendments (Annex 3, paragraph 2.1.2.2.1.) and paragraph 5.1.1.1.(b)(1) of FMVSS 206.

Ad Annex 1, paragraph 2.2.2.1.1.

- a) The word "**adapt**" should replace "**Attach**" as well as in paragraphs 2.1.2.1.1., 2.1.2.2.1., and 2.2.2.2.1. of Annex 1.
- b) The words "**fixture with**" should be added before the word "**latch**" in order to be consistent with the text of paragraph 5.2.1.2.(a)(1) of FMVSS 206.

(Paragraph 5.1.1.2(a)(1) of FMVSS206 should be corrected by adding the word "**as**")

Ad Annex 1, paragraph 2.2.2.2.1.

- a) The sentence "**Align the direction of the engagement parallel to the linkage of the fixture**" should be deleted in order to keep consistent the text of gtr No. 1 with those of Regulation No. 11, 03 series of amendments (Annex 3, 2.2.2.2.1.) and paragraph 5.1.1.2.(b)(1) of FMVSS 206.
- b) Add the word "**as**" after the word "**so**", as editorial correction.

Ad Annex 1, paragraph 2.3.2.1.

As for paragraph 2.2.2.1.1.

(FMVSS 206 should be aligned accordingly, replacing "**Attach**" with "**Adapt**" in 5.1.1.3.(a))

Ad Annex 4, paragraph 3.6.1.

The introduction of the word "**least**" is an editorial alignment to paragraph 3.6.1. of Annex 4 of gtr No. 1, paragraph 3.6.1. of Annex 6 of Regulation No. 11, 03 series of amendments and to paragraph 5.2.2.3.(f)(1)(i) of FMVSS 206.

Ad Annex 4, paragraph 3.6.3.

The deletion of "~~as close to the~~" and the added sentence "**such that the long edge of the plate is as close to the edge of the interior**" would align the text of the gtr with 5.2.2.3(f)(3) of FMVSS 206.

Ad Annex 4, paragraph 3.7.3.

Alignment with paragraph 5.2.2.3.(g) of FMVSS 206.

Ad Annex 4, paragraph 4.1.

Alignment with 5.2.2.4.(a) of FMVSS 206.

Annex 1

**DOOR LOCKS AND RETENTION COMPONENTS
FMVSS 206 AND REGULATION No. 11 (02 series of amendments)**

		<i>FMVSS 206</i>	<i>ECE R11.02</i>	<i>TECHNICAL DIFFERENCES IN REGULATIONS</i>	<i>DRAFT GLOBAL REGULATION</i>
2. LATCHES (continued)					
2.3	HINGED BACK DOORS				
	2.3.1	Each back door must have at least one primary latch and striker assembly with: - a fully latched position; and - a secondary latched position	No requirement	EU/ECE do not apply to back doors.	<i>Take US :</i> Each back door must have at least one primary latch and striker assembly with: - a fully latched position; and - a secondary latched position
	2.3.2	<u>Load test one:</u> - fully latched: 11,000 N - secondary latch: 4,450 N Application of load: perpendicular to the face of the latch such that the latch and striker anchorage are not compressed against each other	No requirement	EU/ECE do not apply to back doors.	<i>Take US :</i> <u>Load test one:</u> - fully latched: 11,000 N - secondary latch: 4,450 N Application of load: perpendicular to the face of the latch such that the latch and striker anchorage are not compressed against each other
	2.3.3	<u>Load test two:</u> - fully latched: 8,900 N - secondary latch: 4,450 N Application of load: in the direction of the fork-bolt opening and parallel to the face of the latch	No requirement	EU/ECE do not apply to back doors.	<i>Take US :</i> <u>Load test two:</u> - fully latched: 8,900 N - secondary latch: 4,450 N Application of load: in the direction of the fork-bolt opening and parallel to the face of the latch
	2.3.4	<u>Load test three:</u> Back door, opening upwards: Fully latched position shall not disengage under load of 8,900 N Application of load: orthogonal to directions of load tests one and two	No requirement	EU/ECE do not apply to back doors.	<u>Take US :</u> <u>Load test three:</u> Back door, opening upwards: Fully latched position shall not disengage under load of 8,900 N Application of load: orthogonal to directions of load tests one and two
	2.3.5	<u>Inertia load:</u> Fully latched position shall not disengage under inertia load of 30g. Application of inertia load: in the directions of load tests one, two and three	No requirement	EU/ECE do not apply to back doors.	<i>Take US :</i> <u>Inertia load:</u> Fully latched position shall not disengage under inertia load of 30g. Application of inertia load: in the directions of load tests one, two and three
	2.3.6	Auxiliary back door latches if present, must comply with load tests one and two and inertia load described above.	No requirement	EU/ECE do not apply to back doors.	<i>Take US :</i> Auxiliary back door latches if present, must comply with load tests one and two and inertia load described above.

		<i>FMVSS 206</i>	<i>ECE R11.02</i>	<i>TECHNICAL DIFFERENCES IN REGULATIONS</i>	<i>DRAFT GLOBAL REGULATION</i>
3. HINGES					
3.1	SIDE DOOR				
	3.1.1	No requirement	The retention components of hinged mounted side doors, other than folding doors, shall be mounted at the forward edge in the direction of travel. In the case of double doors, this requirement shall apply to the door wing which opens first, the other wing shall be capable of being bolted	Rear hinging of side doors prohibited in ECE, except for double doors.	Hinged side doors shall not have their hinges mounted on the rear of the door. In the case of double doors this prohibition shall only apply to the door wing which opens first ; the other wing shall be capable of being bolted.
	3.1.2	Longitudinal and transverse loads: Each side door hinge system must: - support the door withstand a longitudinal load of 11,000 N withstand a transverse load of 8,900 N.	Longitudinal and transverse loads: The retention components must: - support the door withstand a longitudinal load of 11,110 N withstand a transverse load of 8,890 N.	None, except for rounding of figures	<i>Take US :</i> Longitudinal and transverse loads: Each side door hinge system must: - support the door - withstand a longitudinal load of 11,000 N - withstand a transverse load of 8,900 N.
3.2	BACK DOORS				
	3.2.1	Load test one: each back door hinge system shall - support the door - shall not separate under load of 11,000 N Application of load: perpendicular to the hinge face plate such that the hinge plates are not compressed against each other	No requirement	ECE does not apply to back doors	<i>Take US :</i> Load test one: each back door hinge system shall - support the door - shall not separate under load of 11,000 N Application of load: perpendicular to the hinge face plate such that the hinge plates are not compressed against each other
	3.2.2	Load test two: No separation under load of 8,900N Application of load: perpendicular to the axis of the hinge pin and parallel to the hinge face plate such that the hinge plates are not compressed against each other	No requirement	ECE does not apply to back doors	<i>Take US :</i> Load test two: No separation under load of 8,900N Application of load: perpendicular to the axis of the hinge pin and parallel to the hinge face plate such that the hinge plates are not compressed against each other
	3.2.3	Load test three: Back doors opening upward: no separation under load of 8,900N Application of load: in the direction of the axis of the hinge pin	No requirement	ECE does not apply to back doors	<i>Take US :</i> Load test three: Back doors opening upward: no separation under load of 8,900N Application of load: in the direction of the axis of the hinge pin