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Working Party on Passive Safety (GRSP)  
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agenda item 1.3.1.)

PROPOSAL FOR DRAFT 05 SERIES OF AMENDMENTS TO REGULATION No. 16  
(Safety-belts)

Transmitted by the Experts from Japan and Spain

Note: The text reproduced below was prepared by the experts from Japan and Spain in order to complete the proposal adopted in principle by GRSP during its twenty-ninth session (TRANS/WP.29/GRSP/29, annex 2).

Words changed from the current version of Regulation No. 16 are underlined.

Words changed from adopted texts reported in TRANS/WP.29/GRSP/29 annex 2, are **bold-faced**.

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Note: This document is distributed to the Experts on Passive Safety only.

A. PROPOSAL

Insert a new paragraph 2.28., to read:

"2.28. Tension-reducing device:

A device which is incorporated in the retractor and reduces the tension of the strap automatically when the safety belt is fastened. When it is released, such a device shall be switched ed off automatically."

Insert a new paragraph 5.3.4.2.2.4., to read:

"5.3.4.2.2.4. the letter "t" in the case of a safety belt with a retractor incorporating a tension-reducing device"

Paragraphs 5.3.4.2.2.4. and 5.3.4.2.2.5. (former), renumber as paragraphs 5.3.4.2.2.5. and 5.3.4.2.2.6.

Paragraph 6.2.5.2.2., amend to read:

"6.2.5.2.2. If the retractor is part of a lap belt, ...

If the retractor is part of an upper torso restraint, the retracting force of the strap shall be not less than 0.1 daN and not more than 0.7 daN when similarly measured. ~~except for a belt equipped with a tension-reducing device, the minimum retracting force may be reduced to 0.05 daN only when such a device is in operation mode.~~ If the strap passes through a guide or pulley, the retracting force shall be measured in the free length between dummy and guide or pulley. If the assembly incorporates a device that, upon manual or automatic operation prevents the strap from being completely retracted, such a device shall not be operated when these requirements are assessed. If the assembly incorporates a tension-reducing device, the retraction force of the strap described in the above shall be measured on condition that such a device is in operation mode and non operation mode when these requirements are assessed before and after durability tests according to paragraph 6.2.5.2.3."

Paragraph 6.2.5.2.3., amend to read:

~~"6.2.5.2.3. The strap shall be withdrawn from the retractor and allowed to retract repeatedly by the method described in paragraph 7.6.1. until 5,000 cycles have been completed. The retractor shall then be subjected to the corrosion test given in paragraph 7.2. and after that to the dust test given in paragraph 7.6.3. It shall then satisfactorily complete a further 5,000 cycles. If the assembly incorporates a tension-reducing device, the above tests shall be conducted on condition that the tension-reducing device is in operation mode and in non operation mode. After the above tests the retractor shall operate correctly and still meet the requirements of paragraphs 6.2.5.2.1. and 6.2.5.2.2. above."~~

Paragraph 6.2.5.3.4., amend to read:

"6.2.5.3.4. If the retractor is part of a lap belt, .....

If the retractor is part of an upper torso restraint, the retracting force of the strap shall be not less than 0.1 daN and not more than 0.7 daN when similarly measured, except for a belt equipped with a tension-reducing device, in which case the minimum retracting force may be reduced to 0.05 daN only when such a device is in operation mode. If the strap passes through a guide or pulley, the retracting force shall be measured in the free length between the dummy and the guide or pulley.

If the assembly incorporates a device that upon manual or automatic operation prevents the strap from being completely retracted, such a device shall not be operated when these requirements are assessed.

If the assembly incorporates a tension-reducing device, the retracting force of the strap described in the above shall be measured on condition that such a with the device is in operation mode and non-operation mode when these requirements are assessed before and after durability tests according to paragraph 6.2.5.3.5."

Paragraph 6.2.5.3.5., amend to read:

"6.2.5.3.5. The strap shall be ..... (making 45000 in all).

If the assembly incorporates a tension-reducing device, the above tests shall be conducted on condition that the tension-reducing device is in operation mode and in non-operation mode.

After the above tests, the retractor shall operate correctly and still meet the requirements of paragraphs 6.2.5.3.1., 6.2.5.3.3. and 6.2.5.3.4. above."

Insert new paragraphs 6.2.5.4. to 6.2.5.4.2., to read:

"6.2.5.4. Retractors must fulfill, after durability test according to paragraph, 6.2.5.2.3. or 6.2.5.3.5., and immediately after the retracting force measurement according to 6.2.5.2.2 or 6.2.5.3.4., all next two specifications:

6.2.5.4.1. When retractors except automatically locking retractors are tested according to paragraph 7.6.4.2, the retractors must be able to avoid any slack between torso and belt, and,

6.2.5.4.2. When the buckle is unlatched to release the tongue, the retractor alone must be able to retract strap fully."

Insert a new paragraph 6.4.1.2.5., to read:

"6.4.1.2.5. In the case of a safety-belt with tension-reducing device, it shall be subjected to a durability test with such a device in operation mode according to paragraph 6.2.5.3.5 before a dynamic test. The dynamic test shall then be conducted on condition that with the tension-reducing device is in operation mode."

Paragraph 7.6.4.1., amend to read:

"7.6.4.1. The retracting force shall be measured with the safety-belt assembly fitted to a dummy as for the dynamic test prescribed in paragraph 7.7. The strap tension shall be measured at the point of contact with (but just clear of) the dummy while the strap is being retracted at the approximate rate of 0.6 m/min. In the case of a safety-belt with tension-reducing device, the retracting force and strap tension shall be measured on condition that a with the tension-reducing device is in both operation mode and non-operation mode."

Insert a new paragraph 7.6.4.2., to read.

"7.6.4.2. Before the dynamic test described in paragraph 7.7. the seated dummy, which is clothed with a cotton shirt, shall be tilted frontward until 350 mm of the strap is withdrawn from retractor, and then released to the initial position."

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