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From Michèle MAITRE ISO/TC22/SC12 "Passive safety crash protection systems" to Pierre CASTAING (Chair of UNECE/GRSP informal CRS working group)

Information from ISO/TC22/SC12 Secretary following the last meeting of its WG1 "*Child restraint systems (in road vehicles)*" held in Munich in December 2009.

1°) New ISO publications

Following request from WP29/ GRSP, SC12/WG1 has managed technical works and produced the

- ✓ **ISO/PAS 13396:2009** "*Road vehicles — Sled test method to enable the evaluation of side impact protection of child restraint systems — Essential parameters*" published on **2009-11-15**

Another ISO publication of interest for the Informal Group on Child Restraint System is

- ✓ **ISO/TS 29062:2009** "*Road vehicles — Child restraint systems — Sled test method to enable the evaluation of side impact protection*" published on **2009-11-15**

2°) ISOFIX (ISO 13216-1) mass limit information to ECE CRS group

During its last meeting SC12/WG1 took a resolution requesting me to inform Pierre CASTAING about the scope regarding strength requirements in the original ISOFIX standard (13216-1).

The resolution is the following:

Resolution 257: WG 1 asks the SC 12 secretariat to inform the lead of UNECE/GRSP informal CRS working group that ISOFIX is originally dimensioned for children up to 22 kg, taking into account a maximum allowed CRS mass of 15 kg.

This is important to point out, as the new ECE regulation will probably use a combined limit of child + CRS mass to regulate the use of ISOFIX with regard to strength. This means, for example, that it should be possible to use ISOFIX for a child of 25 kg if the CRS mass is 12 kg. The SC 12 secretary is asked to forward at least an excerpt of ISO 13216-1:1999 including the scope, where the mass limit is stated.

The warning is that according to ISO 13216-1, ISOFIX is actually dimensioned for up to 22 kg child mass (taking into account that a CRS is allowed to weigh up to 15 kg). There is a (possible) general confusion in the **new ECE work** that ISOFIX is only dimensioned for up to 18 kg, but this is only an effect of the ECE implementation, where ISOFIX is allowed for group 1 (up to 18 kg) but not group 2 (up to 25 kg). **In the new regulation**, the combined mass of child + CRS will be the "dimensioning rule" with regard to strength.

It is then quite important to point out that ISOFIX can carry $22+15 \text{ kg} = 37 \text{ kg}$, and not only $18+15 \text{ kg} = 33 \text{ kg}$. Example: It should be possible to use ISOFIX for a child of 25 kg if the CRS mass is 12 kg.

You will find in Annex an excerpt of the ISO 13216-1:1999

ANNEX

Scope of ISO 13216-1:1999

1 Scope

This part of ISO 13216 specifies the dimensions, general requirements and static strength requirements of rigid anchorages for anchoring child restraint systems (CRS) in vehicles. It is applicable to fittings for the installation of CRSs for children with a mass of up to 22 kg, by means of two rigid anchorages positioned in the seat bight area, in passenger carrying vehicles.

NOTE 1 This mass limit applies to CRSs where the inertia forces of the child and CRS are transferred via the anchorage system for the CRS. The anchorages may be used for systems for larger children, such as seats where the main forces are transferred through the adult seat belt, provided that the forces applied to the anchorages and the resulting excursions (see 4.2) do not exceed the limits in this part of ISO 13216.

To assure compatibility with the anchorages, this part of ISO 13216 also specifies important features of CRSs equipped with rigid attachments, such as critical dimensions of the attachments and general requirements for handling. Supplementary devices, such as tether straps and reaction bars, which may be necessary for specific vehicle configurations or to fulfil performance criteria included in national and international standards and regulations, are not specified in this part of ISO 13216.

An interim anchorage system that employs semi-rigid anchorages in the vehicle is described in annex A. Requirements for optional non-rigid attachments on the CRS are given in annex B.

NOTE 2 Performance and strength requirements for the homologation of CRSs using attachments according to this part of ISO 13216 are presumed to be specified in other standards and regulations.

Many thanks to transmit this information to the regulatory experts of your group.

Best regards