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World Forum for Harmonization of Vehicle Regulations

Working Party on Passive safety

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Item 10 of the provisional agenda

Regulation No. 14 (Safety-belt anchorages)**Proposal for Supplement 2 to the 07 series of amendments to
Regulation No. 14****Submitted by the expert from Germany***

The text reproduced below was prepared by the expert from Germany and aims to provide the rationale behind exempting certain vehicles of category M₁ from complying with the mandatory installation of ISOFIX anchorages on the rear seats. It supersedes ECE/TRANS/WP.29/GRSP2008/23 and is based on a document without symbol (GRSP-46-16) distributed during the forty-sixth session of the Working Party on Passive Safety (GRSP). The modifications to the current text of Regulation No. 14 are marked in bold 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 the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Paragraph 5.3.8.3., amend to read:

- “5.3.8.3. Notwithstanding paragraph 5.3.8.1. at least one of the two ISOFIX positions systems shall be installed at the second seat row. **This does not apply to vehicles of category M₁ with:**
- (a) **not more than two passenger doors and**
 - (b) **a rear designated seating position for which interference with transmission and/or suspension components prevents the installation of ISOFIX anchorages according to the requirements of paragraph 5.2.3. and**
 - (c) **having a Power to mass ratio index (PMR) exceeding [120] according to the definitions within Regulation No. 51 and**
 - (d) **having an engine developing a maximum power greater than 140 kW. Such a vehicle needs to have only one ISOFIX anchorage system at a front passenger designated seating position [combined with an airbag deactivation device].”**

II. Justification

The view on the cross-section of the rear compartment of some sports cars, often referred to as a 2+2-seater, reveals a limited construction space in the lower area between the rear seats, the chassis and the body. Parts like the firewall, transmission elements, the power train and suspension components limit the installation space and therefore prevent the installation of ISOFIX anchorages in this area.

Although having limited space available on the rear seats, these vehicles are suitable to transport children in Child Restraint Systems (CRS) using seat belts for the installation and fixation of the CRS. Mostly these CRS are non-universal CRS, but universal CRS are available as well for these vehicles.

In the absence of a definition for this vehicle configuration within the legal framework of the 1958 Agreement, the decision whether ISOFIX positions are required is made up by setting up requirements to exempt these vehicles from the ISOFIX installation on the rear seats. Instead of the anchorages on the rear seats, the vehicles have to have an ISOFIX anchorage at a front passenger seat (with an airbag deactivation device).

To provide a definition of the vehicle configuration to be exempted, four criteria have been identified. The first criterion is the number of passenger doors on the vehicle, that is limited to two doors. The second is the setup of the vehicle's transmission and suspension system. Having an interference between these components or the installation requirements for these components, the limited space would make it impossible to install the anchorage points. The third criterion is the PMR (Power to Mass Ratio index). This index as well as the value of 120 is used in Regulation No. 51 (Noise emissions) to distinguish between high performance sport cars and normal cars. In addition a minimum engine power requirement is introduced to limit it to sport cars only.

Definition of the Power Mass Ratio (PMR) according to Regulation No. 51:

$$PMR = (P_n / m_t) * 1000 \text{ kg/kW}$$

with: P_n : rated maximum engine power expressed in kW

- m_{ro} : mass of a vehicle in running order expressed in kg
 - $m_t = m_{ro}$ (for vehicles of category M_1)
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