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World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Passive Safety (GRSP)  
(Thirty-seventh session, 23-27 May 2005,  
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**PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 16**  
(Safety belts)

Transmitted by the expert from France

## A - PROPOSAL

### Modification of Paragraph 8.2.2.5:

- 8.2.2.5. The technical service shall verify that, with the buckle tongue engaged in the buckle ~~and no occupant in the seat:~~
- 8.2.2.5.1. the possible slack in the belt does not prevent the correct installation of child restraint systems recommended by the manufacturer, and
- 8.2.2.5.2. in the case of three-point belts, a tension of at least 50 N can be established in the lap section of the belt by external application of tension in the diagonal section of the belt, **when positioned:**
- **on a 10-year manikin as specified in annex 8, appendix 1 of Regulation ECE R44 and set in accordance with annex 17 appendix 4 of the present Regulation;**
  - **and on the fixture specified in annex 17, appendix 1, figure 1 of the present regulation for the seats that enable the installation of a child restraint device of universal category.**

Insertion of a new appendix in annex 17:

### **Annex 17 - Appendix 4**

#### **Installation of 10-year manikin:**

- **Adjust the seat to its fully rearward position.**
- **Adjust the seat height in accordance with the manufacturer's specifications. In the absence of any specification, adjust the seat to the lowest position.**
- **Adjust the seat back angle to the manufacturer's design position. In the absence of any specification, an angle of 25 degrees from the vertical, or the nearest fixed position of the seat back, should be used.**
- **Set the shoulder anchorage to the lowest position.**
- **Set the manikin on the seat ensuring the pelvis is in contact with the seat back.**
- **The longitudinal plan passing by the manikin centre line will be on the apparent centre line of the seating position.**

## B - JUSTIFICATION

The 50 N tension was introduced so as to guarantee the free sliding motion of the lap section of the belt in the tongue to ensure the restraint of universal child restraint systems and the restraint of any passenger of 10 years old and more.

The introduction in 1999, with the supplement 8 of the series 4 of amendments of Regulation ECE 16, of a fixture to check the compatibility of safety belts with child restraint systems of “universal category” no longer justifies the verification of the tension of the lap section without occupant.

Therefore, it is proposed to check this 50 N tension with the manikin that corresponds to the lowest limit of use of the belt and with the fixture for the seats that enable the installation of a child restraint system of “universal” category.

This amendment aims at reducing the risks of interference of the tongue of the unbuckled belt with the interior components and the vehicle doors and at improving the grip of the tongue to buckle the belt.