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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### 193rd session

Geneva, 25–28 June 2024

Item 4.6.3 of the provisional agenda

#### 1958 Agreement:

Consideration of draft amendments to existing

UN Regulations submitted by GRSP

## Proposal for Supplement 1 to the 04 series of amendments to UN Regulation No. 129 (Enhanced Child Restraint systems)

### Revision

### Submitted by the Working Party on Passive Safety\*

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at its seventy-fourth session (ECE/TRANS/WP.29/GRSP/74, paras. 25 and 28). It is based on ECE/TRANS/WP.29/GRSP/2023/38, not amended, and GRSP-74-29-Rev.1 as reproduced by annex VI to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration at their June 2024 sessions.

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\* In accordance with the programme of work of the Inland Transport Committee for 2024 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



Paragraph 6.1.3.4., amend to read:

"6.1.3.4. Enhanced Child Restraint Systems of the booster seat and booster cushion categories shall have only one adult safety-belt route and a main load-bearing contact point, between the Enhanced Child Restraint System and the adult safety belt. This point shall not be less than 150 mm from the Cr axis when measured with the Enhanced Child Restraint System on the dynamic test bench installed in accordance with paragraph 7.1.3.5.2.2. of this Regulation, without a dummy. This shall apply to all adjustment setups and webbing paths."

Paragraphs 6.6.4. to 6.6.4.1.2.3., amend to read:

"6.6.4. Dynamic test

6.6.4.1. General: The dynamic test shall be performed on Enhanced Child Restraint Systems which have not previously been under load and the Enhanced Child Restraint System shall be subjected to dynamic tests, in accordance with Table 3, in conformity with paragraph 7.1.3. below:

Table 3

**Application of different criteria depending on test set up**

<i>Frontal impact</i>				<i>Rear impact</i>		<i>Lateral impact</i>	
<i>Test on trolley+ standard seat</i>		<i>Test in car body</i>		<i>Test on trolley+ standard seat</i>	<i>Test in car body</i>	<i>Test on trolley+ standard seat</i>	
Forward facing	Rearward and lateral facing	Forward facing	Rearward and lateral facing	Rearward and lateral facing	Rearward and lateral facing	Forward facing	Rearward and lateral facing

Note 1: Standard seat means a test seat or test bench as defined in Annex 6.

Note 2: For lateral facing Enhanced Child Restraint Systems in lateral impact, if two positions are possible, then the dummy's head shall be situated near the side door.

6.6.4.1.1. i-Size and Universal category Enhanced Child Restraint Systems shall be tested on the test bench prescribed in Annex 6, and in conformity with paragraph 7.1.3.1. below.

6.6.4.1.2. Specific Vehicle Enhanced Child Restraint Systems shall be tested in one of the following ways:

6.6.4.1.2.1. Specific Vehicle Enhanced Child Restraint Systems that attach to the car using the adult seat belt or using ISOFIX attachments that comply with paragraph 6.3.3., shall be dynamically tested on the test bench prescribed in Annex 6 and in conformity with paragraph 7.1.3.1. of this Regulation. This shall apply to Specific Vehicle ISOFIX ECRS only if they are equipped with an anti-rotation device that conforms to paragraph 6.3.4. or 6.3.5. Alternatively, these Specific Vehicle ECRS can be tested in a vehicle body shell in conformity with paragraph 7.1.3.2. of this Regulation.

6.6.4.1.2.2. Specific Vehicle Enhanced Child Restraint Systems that use attachment methods not defined in this regulation shall be dynamically tested in a vehicle body shell in conformity with paragraph 7.1.3.2. or in a complete vehicle in conformity with paragraph 7.1.3.3. of this Regulation. Notwithstanding paragraph 6.6.4.1.2.2.1. below, these tests shall be carried out for each vehicle specified in the ECRS car fitting list. This also applies to Specific Vehicle ISOFIX ECRS that are not equipped with an anti-rotation device that conforms to paragraph 6.3.4. or 6.3.5. and instead use the vehicle seat cushion to limit the pitch rotation of the ECRS in a front impact.

6.6.4.1.2.2.1. Before the dynamic test in a vehicle body shell, the Enhanced Child Restraint System shall first be assessed for fit with every vehicle specified in the ECRS car fitting list. The Technical Service shall then ensure that sufficient parts of

each vehicle body shell are used in the dynamic test to be representative of the vehicle structures and impact surfaces, including the vehicle seat cushions and underlying structures. If the Enhanced Child Restraint System is intended for use in the rear seat, these shall include the back of the front seat, the rear seat, the floor pan, the B and C pillars and the roof. If the Enhanced Child Restraint System is intended for use in the front seat, the parts shall include the dashboard, the A pillars, the windscreen, any levers or knobs installed in the floor or on a console, the front seat, the floor pan and the roof. The Technical Service responsible for conducting the dynamic test may permit items to be excluded if they are found to be superfluous. The Technical Service may also reduce the number of vehicles tested if they do not differ greatly in the aspects listed above. However, testing at simple extremes of differences in dimensions or material properties is not allowed. Testing shall be as prescribed in paragraph 7.1.3.2. of this Regulation, except for lateral impact.

*Insert new paragraphs 7.1.3.1.1.8., to read:*

"7.1.3.1.1.8. When testing a booster cushion in frontal impact tests on the test bench prescribed in Annex 6, an optional dummy protective device, as described in Annex 6 paragraph 3.4., may be installed on the test bench, at the decision of the technical service."

*Annex 6, Insert new paragraphs 3.4., to read:*

"3.4. Optional dummy protective device

An optional dummy protective device may be installed on the test bench for the dynamic frontal test of booster cushion when tested on the test bench described in this Annex.

The dummy protective device may be covered with the Polychloropren foam of the lateral impact door as defined in Appendix 3 of this Annex, or an alternative material, at the decision of the technical service.

The dimensions of the dummy protective device are given in Appendix 3 of this Annex.

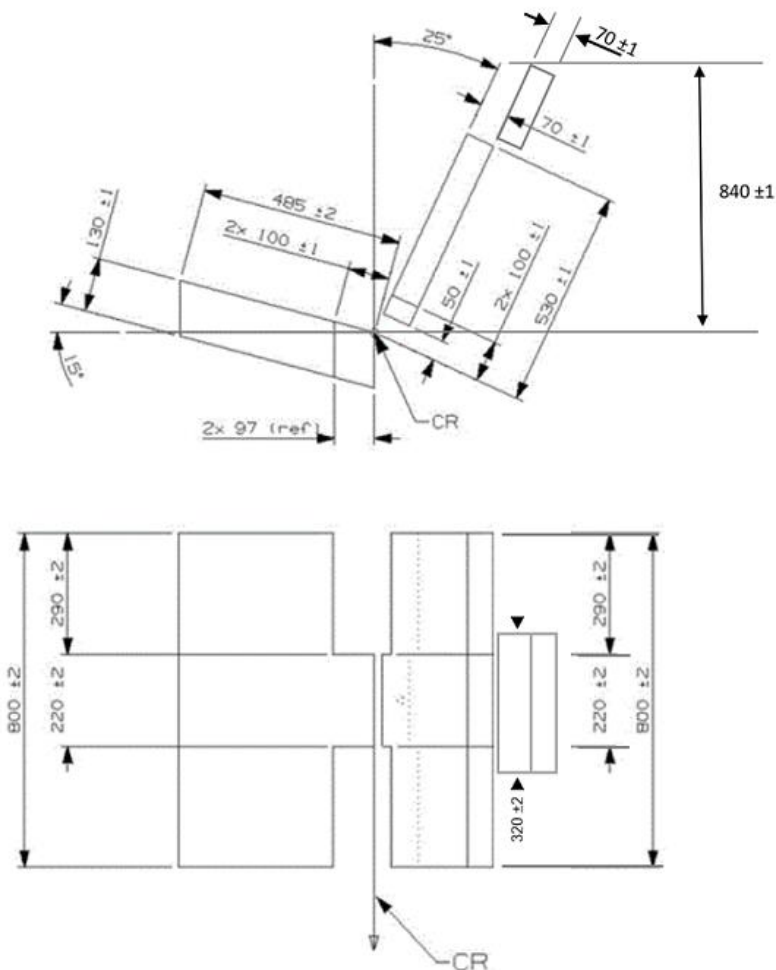
The forward face of the dummy protective device shall be parallel with the back of the backrest. The design of the dummy protective device shall be such that it does not interfere with the manikin when positioned on the test bench. Furthermore, the dummy protective device shall not interfere with the dummy and/or the adult 3-point belt during the dynamic test until the maximum horizontal head excursion has been reached.

Any other device giving equivalent results can be accepted."

Insert new Annex 6 – Appendix 5, to read:

**" Annex 6 - Appendix 5  
Optional Dummy Protective Device**

Figure 1



All dimensions in millimetres"

Annex 27, amend to read:

**"Annex 27**

**Type Approval Test Report Template**

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8.1 Minimum Dynamic Test Information (per test)

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Sled Type (Deceleration/Acceleration)

Test Bench Type (Test on trolley+standard seat/Test in car body)

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8.1 *Minimum Dynamic Test Information (per test)*

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If testing in car body, specify make/model

Impact Speed

km/h

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