



# Economic and Social Council

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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### Working Party on Passive Safety

#### Fifty-second session

Geneva, 11–14 December 2012

Item 14 of the provisional agenda

**Regulation No. 29 (Cabs of commercial vehicles)**

## **Proposal for Supplement 2 to the 02 series of amendments and for Supplement 1 to the 03 series of amendments**

### **Submitted by the expert from Germany\***

The text reproduced below was prepared by the expert from Germany including further possibilities for the arrangement of the test dummy. The modifications to the text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, 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 1

## (Draft Supplement 2 to the 02 series of amendments)

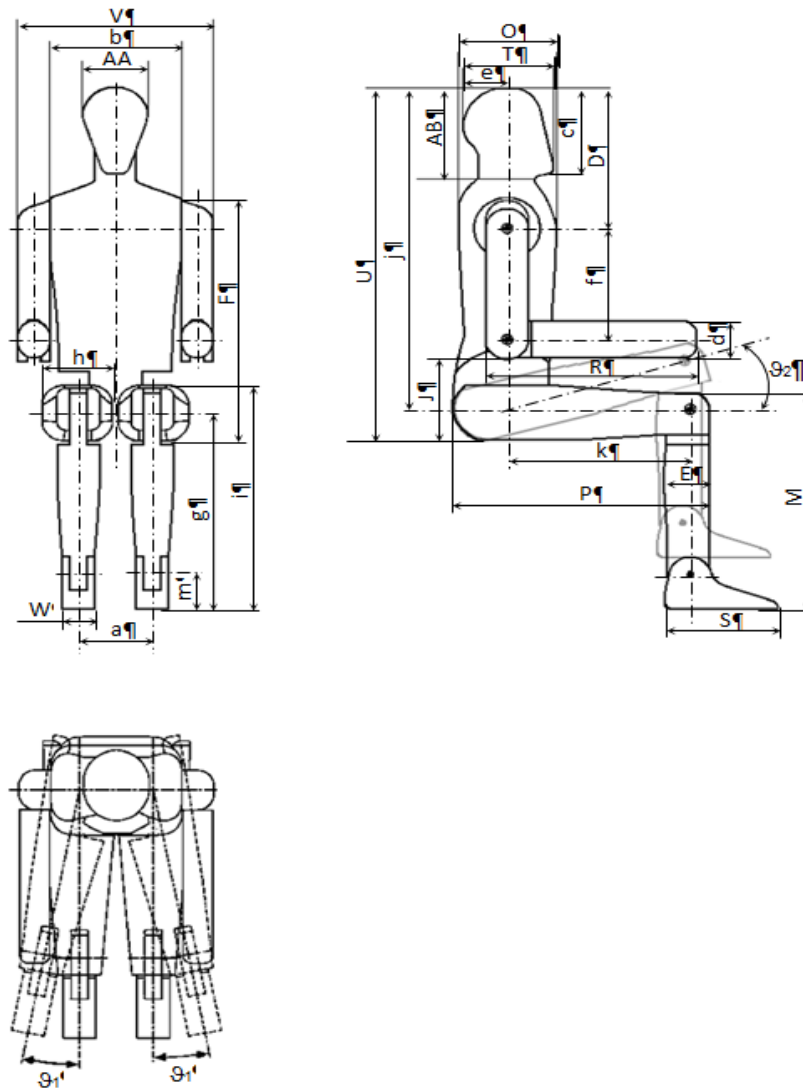
Paragraph 5.3.1., amend to read:

"5.3.1. After undergoing each of the tests referred to in paragraph 5.2. above, ... the assessment of the survival space. **As an alternative to the test manikin defined in Annex 3, Appendix 2, a fiftieth percentile Hybrid II or III male dummy, with or without measuring instrumentation, the description of which is given in Regulation No. 94, may be used.**"

Annex 3, Appendix 2,

The figure, amend to read:

"



"

The table, amend to read:

<i>Material:</i>	Polystyrene; density $0.0169 \text{ g/cm}^3$	
<i>Mass:</i>	4.54 kg	
<i>Dimensions:</i>	...	cm
	...	...
	$\vartheta_1$ Lateral rotation of the legs	$20^\circ$
	$\vartheta_2$ Upward rotation of the legs	$[45^\circ]$
		"

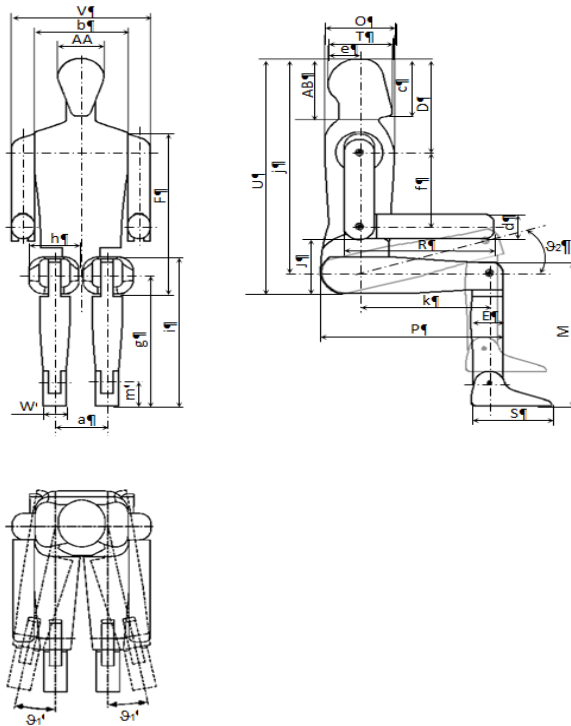
## II. Proposal 2

(Draft Supplement 1 to the 03 series of amendments)

Annex 3, Appendix 2,

The figure, amend to read:

"



"

The table, amend to read:

"

<i>Dimensions</i>		
<i>Name</i>	<i>Description</i>	<i>Dimension. in mm</i>
AA	Breadth of head	153
...	...	...
$\vartheta_1$	Lateral rotation of the legs	20°
$\vartheta_2$	<b>Upward rotation of the legs</b>	<b>[45°]</b>

"

### III. Justification

1. In some cabs, the driver's seating position is made so that the pedals are on both sides of the steering column. In this case the usual dummy's position on the driver's seat does not reflect the actual position of the driver. The legs must be moved laterally to better reflect the reality.
2. In addition the third seat between the driver's seat and the passenger's seat is sometimes placed in such a way that the feet of the occupant are lifted up due to the tunnel which accommodates the engine below the cab. Again the usual dummy can't be placed in a way that reflects the actual position of the occupant. There must be a way to move the legs upward. A second angle of rotation is needed. The value of the angle is left between brackets until further evaluation. The two angles are differentiated by names  $\vartheta_1$  and  $\vartheta_2$  respectively in the proposals.
3. The fact that the 03 series of amendments allows the Hybrid II or III to replace the usual dummy already allows such movements laterally and upwards. Moreover it already includes the provision for a lateral " $\Theta$ " angle.
4. As 02 and 03 series of amendments follows the same safety principles, it should also be possible after tests according to the 02 series of amendments to use Hybrid II or Hybrid III to check the survival space.
5. It is also necessary to include these provisions in the 02 series of amendments since the 03 series will enter into force for new type approvals only on 30 January, 2017.

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