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**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Passive Safety****Seventy-third session**

Geneva, 15–19 May 2023

Item 7 of the provisional agenda

**UN Regulation No. 17 (Strength of seats)****Proposal for the 11 Series of Amendments to UN Regulation No. 17 (Strength of seats) \*****Submitted by the expert from Germany**

The text reproduced below was prepared by the expert from Germany after consultation with a group of interested experts consisting of representatives from France, Japan, the Netherlands, the European Association of Automotive Suppliers (CLEPA) and the International Organization of Motor Vehicle Manufacturers (OICA). This proposal supersedes ECE/TRANS/WP.29/GRSP/2022/21 presented at the seventy-second session of the Working Party on Passive Safety (GRSP). The proposal aims to bring the current text of the UN Regulation No. 17 in line with its scope, to ensure, that only safe head restraints will be fitted to seats in all seating positions and all vehicle categories, specified in the scope. The modifications to the current 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 2023 as outlined in proposed programme budget for 2023 (A/77/6 (Sect. 20), table 20.6), 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.

## I. Proposal

*Paragraph 1, amend to read:*

### "1. Scope

This Regulation applies to:

- (a) Vehicles of categories M<sub>1</sub> and N<sup>1</sup> with regard to the strength of seats and their anchorages and with regard to their head restraints;
- (b) Vehicles of categories M<sub>2</sub> and M<sub>3</sub><sup>1</sup> with regard to seats not covered by Regulation No. 80, in respect of the strength of seats and their anchorages, and in respect of their head restraints;
- (c) Vehicles of category M<sub>1</sub> with regard to the design of the rear parts of seat backs and the design of devices intended to protect the occupants from the danger resulting from the displacement of luggage in a frontal impact.

It does not apply to vehicles with regard to side-facing or rearward-facing seats, or to any head restraint fitted to these seats, with the exception vehicles of category M<sub>2</sub> and M<sub>3</sub> of classes A and I, subject to the provisions of paragraph 5.1.1.

**Vehicles of other categories may also be approved under this Regulation, in respect of the strength of seats and their anchorages, and in respect of their head restraints."**

*Paragraphs 5.4. to 5.4.2., amend to read:*

"5.4. Mounting of head restraints

5.4.1. A head restraint shall be mounted on every outboard front seat in every vehicle of category M<sub>1</sub>. ~~Seats fitted with head restraints, intended for fitment in other seating positions and in other categories of vehicles may also be approved to this Regulation.~~

5.4.2. A head restraint shall be mounted on every outboard front seat in every vehicle of category M<sub>2</sub> with a maximum mass not exceeding 3500 kg and of category N<sub>1</sub>; head restraints mounted in such vehicles shall comply with the requirements of Regulation No. 25, as amended by 04 series of amendments."

**Alternatively, seats fitted with head restraints in these categories of vehicles may comply with the requirements of this Regulation."**

*Insert a new paragraph 5.4.3., to read:*

"5.4.3. **Notwithstanding paragraphs 5.4.1. and 5.4.2. above, all forward-facing seats fitted with a head restraint or intended to be fitted with a head restraint in other seating positions and in other categories of vehicles covered by the scope of this UN Regulation shall comply with the requirements of this Regulation."**

*Paragraph 5.7.4., amend to read:*

"5.7.4. ~~Adjustable h~~Head restraint height retention

When tested in accordance with Annex 13, the mechanism of the adjustable head restraint **or any head restraint fulfilling one of the additional**

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<sup>1</sup> As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2 - [www.unece.org/trans/main/wp29/wgs/wp29gen/wp29resolutions.html](http://www.unece.org/trans/main/wp29/wgs/wp29gen/wp29resolutions.html)

requirements described under paragraph 5.8.4. shall not fail in such a way as to allow downward movement of the head restraint by more than 25 mm."

Insert new paragraphs 13.14. to 13.14.5., to read:

- "13.14. As from the official date of entry into force of the 11 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept UN type approvals under this Regulation as amended by the 11 series of amendments.
- 13.14.1. As from 1 September [2024], Contracting Parties applying this Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments that were first issued on or after 1 September [2024].
- 13.14.2. Until 1 September [2026], Contracting Parties applying this Regulation shall accept UN type approvals to the preceding series of amendments that were first issued before 1 September [2024].
- 13.14.3. As from 1 September [2026], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.
- 13.14.4. Notwithstanding paragraph 13.13.4., Contracting Parties applying the Regulation shall continue to accept UN type approvals to the preceding series of amendments to the Regulation, for vehicles which are not affected by the changes introduced by the 11 series of amendments.
- 13.14.5. Contracting Parties applying this Regulation shall not refuse to grant UN type approvals according to any preceding series of amendments to this Regulation or extensions thereof."

Paragraph 4.2., amend to read:

- "4.2. An approval number shall be assigned to each type approved. Its first two digits (at present 10, corresponding to the 10 series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval.

**An approval number shall be assigned to each type approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3 and Amend.1).**

The same Contracting Party may not assign the same number either to the same vehicle type equipped with other types of seats or head restraints or with seats anchored differently on the vehicle (this applies both to seats with and to those without head restraints) or to another vehicle type."

Annex 2, amend to read:

## Annex 2

### Arrangements of the Approval Mark

Model A

(see paragraphs 4.4., 4.4.1., 4.4.2. and 4.4.3. of this Regulation)

Vehicle with at least one seat fitted or capable of being fitted with a head restraint



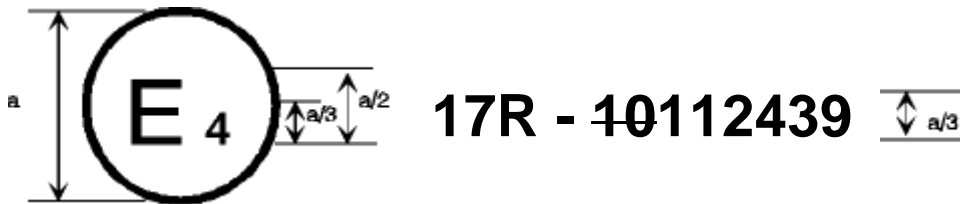
$a = 8 \text{ mm min.}$

The above approval mark when affixed to a vehicle shows that the vehicle type concerned, with regard to the strength of the seats fitted or capable of being fitted with head restraints and with regard to characteristics of the head restraints, has been approved in the Netherlands (E 4) pursuant to UN Regulation No. 17, under the approval number ~~4011~~12439. The first two digits of the approval number indicate that the Regulation already contained the ~~4011~~ series of amendments at the time of approval. The above approval mark also shows that the vehicle type was approved pursuant to UN Regulation No. 17 with regard to the strength of any seats on the vehicle which are not fitted or capable of being fitted with head restraints.

Model B

(see paragraphs 4.4.; 4.4.1. and 4.4.2. of this Regulation)

**Vehicle with seats not fitted or not capable of being fitted with head restraints**



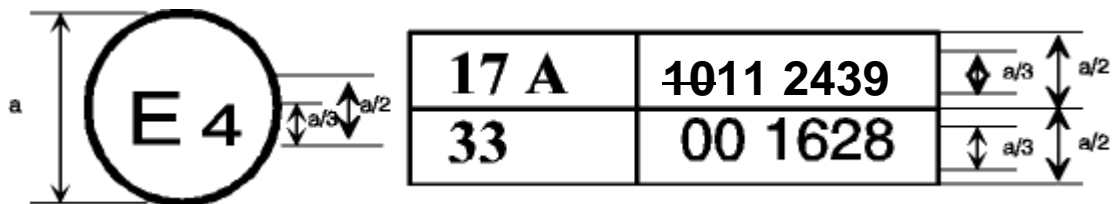
a = 8 mm min.

The above approval mark when affixed to a vehicle shows that the vehicle type has seats not fitted or capable of being fitted with head restraints, and has, with regard to the strength of the seats and their anchorages, been approved in the Netherlands (E 4) pursuant to UN Regulation No. 17 under the approval number ~~4011~~12439. The first two digits of the approval number indicate that the Regulation already contained the ~~4011~~ series of amendments at the time of approval.

Model C

(see paragraphs 4.5. of this Regulation)

**Vehicle with at least one seat fitted or capable of being fitted with a head restraint**



a = 8 mm min.

The above approval mark when affixed to a vehicle shows that the vehicle type has at least one seat fitted or capable of being fitted with a head restraint, and was approved in the Netherlands (E 4) pursuant to UN Regulations Nos. 17 and 33.<sup>1</sup>

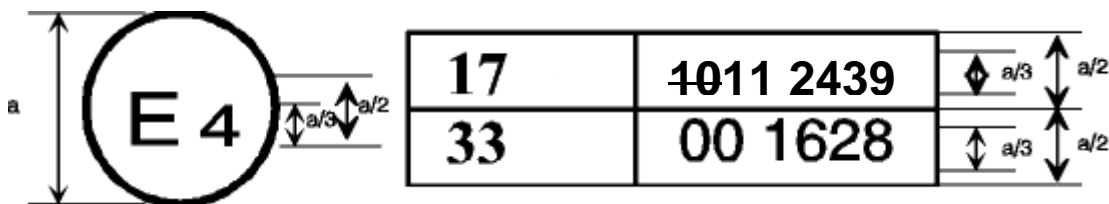
The approval numbers indicate that, on the dates when approval was granted, UN Regulation No. 17 included the ~~4011~~ series of amendments but UN Regulation No. 33 was still in its original form. The above approval mark also shows that the vehicle type was approved pursuant to UN Regulation No. 17 with regard to the strength of any seats on the vehicle which are not fitted or capable of being fitted with head restraints.

<sup>1</sup> The second number is given merely as an example.

Model D

(see paragraphs 4.5. of this Regulation)

**Vehicle with seats not fitted or not capable of being fitted with head restraints**



$a = 8 \text{ mm min.}$

The above approval mark when affixed to a vehicle shows that the vehicle type has seats not fitted or capable of being fitted with head restraints, and was approved in the Netherlands (E 4) pursuant to UN Regulations Nos. 17 and 33.<sup>1</sup> The approval numbers indicate that, on the dates when approval was granted, UN Regulation No. 17 included the ~~40~~11 series of amendments but UN Regulation No. 33 was still in its original form.

<sup>1</sup> The second number is given merely as an example.

*Annex 13, paragraph 2.1., amend to read:*

"2.1. Seat set-up

Adjust the **head restraint in the normal position of use or in case of an** adjustable head restraint so that its effective top is at any of the following height positions at **any backset** position:"

## II. Justification

1. The current text of paragraph 5.7.4. (Height retention of head restraints) is explicitly related to adjustable head restraints. The "High-Level-Requirements" behind this paragraph and the related test described in Annex 13 are in our opinion, that a head restraint shall not move downwards more than 25 mm when a force of 500 N is applied to the top of the head restraint.

2. The same performance requirement should therefore also to be applied to non-adjustable head restraints with a none-use position fulfilling one of the additional requirements from a set of several alternative requirements described under paragraph 5.8.4.

3. The aim of this proposal is to bring the current text of the Regulation in line with the intention of UN Regulation No. 17, to ensure, that only safe head restraints will be fitted.